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Data for December 1975–November 1975 & Miscellanea

Explanation of Data Reports Issued as Number 378 (Supplement) February 1976

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Solar - Geophysical Data

NO. 382 JUNE 1976

Part II (Comprehensive Reports)

DATA FOR
DECEMBER 1975
NOVEMBER 1975
& MISCELLANEA

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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SOLAR - GEOPHYSICAL DATA

No. 382

Issued in two parts

Hope I. Leighton, Editor

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Solar - Terrestrial Data Services Division

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SGD 382 Part II (Comprehensive)

DECEMBER 1975 DATA

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Hα SOLAR FLARES

DECEMBER 1975

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1975 DEC	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		CONF	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
	01	1032	1111	NO FLARE PATROL													
	01	1217	1222	NO FLARE PATROL													
	01	1354	1401	NO FLARE PATROL													
	01	1523	1533	NO FLARE PATROL													
	01	1537	1547	NO FLARE PATROL													
	01	1617	1714	NO FLARE PATROL													
	01	1726	1750	NO FLARE PATROL													
	01	1802	1805	NO FLARE PATROL													
	01	1807	1817	NO FLARE PATROL													
	01	1827	2002	NO FLARE PATROL													
	01	2014	2027	NO FLARE PATROL													
	02	1202	1355	NO FLARE PATROL													
	02	1410	1435	NO FLARE PATROL													
	02	1440	1734	NO FLARE PATROL													
	02	2217	2233	NO FLARE PATROL													
GRP63054	03	0419	0423+2	0450	N02	E14	.243	13964	4.2	31	-F				50	.5	FU
CULG	03	0419	0431	0453	N01	E14	.242	13964	4.2	34	-F		C	0431	40	.4	
MANI	03	0429E	0429U	0440C	N02	E14	.243	13964	4.2	110	-F	3	V	0429	60	.6	U
MITK	03	0439E		0447	N02	E13	.226	13964	4.2	40	-N		P	0439	60	.6	E
	03	1142	1240	NO FLARE PATROL													
	03	1245	1305	NO FLARE PATROL													
	03	2256	2343	NO FLARE PATROL													
	04	0235	0243	NO FLARE PATROL													
	04	0247	0315	NO FLARE PATROL													
	04	0329	0340	NO FLARE PATROL													
	04	0545	0546	NO FLARE PATROL													
	04	1520	1525	NO FLARE PATROL													
	04	1535	1546	NO FLARE PATROL													
55 BOUL	04	2031	2033	2040	N04	E00	.061	13964	4.9	9	-F	2	C	2033	117	1.2	
	04	2225	2310	NO FLARE PATROL													
GRP63056	05	0740	0752+2	0848	N06	W06	.143	13964	4.9	68	1B						EJL
ABST	05	0740	0754	0859	N06	W06	.143	13964	4.9	79	1B		C	0754	349	3.6	EJ
KODA	05	0747E	0752	0841	N07	W07	.167	13964	4.8	540	2B		P	0835	505	5.2	CEL
	05	0910	0921	NO FLARE PATROL													
	05	0937	0943	NO FLARE PATROL													
	05	1110	1113	NO FLARE PATROL													
	05	1125	1132	NO FLARE PATROL													
57 MCMA	05	1620	1623	1632	N03	W17	.296	13964	4.4	12	-F		C	1623	25	.3	D
	05	1759	1835	NO FLARE PATROL													
	06	0318	0335	NO FLARE PATROL													
	06	0429	0520	NO FLARE PATROL													
58 ABST	06	0837	0838	0845	N04	W26	.442	13964	4.4	8	-N		C	0838	87	.9	DW
	06	0932	0943	NO FLARE PATROL													
59 MONT	06	1117	1119	1121	N04	W29	.489	13964	4.3	4	-F		C	1119	20		
	06	1438	1544	NO FLARE PATROL													
	06	1557	1633	NO FLARE PATROL													
	06	1716	1721	NO FLARE PATROL													
GRP63060	06	1740+3	1745+1	1750	N04	W32	.533	13964	4.3	10	-F				30	.4	EL
MCMA	06	1740		1754D	N03	W32	.531	13964	4.3	140	-N		C	1747	35	.4	EL
BOUL	06	1741	1745	1750	N04	W32	.533	13964	4.3	9	-F	1	C	1745	32	.4	
PALE	06	1743	1746	1747	N05	W32	.534	13964	4.3	4	-F	3	C		16		DE
61 CULG	06	1949	2010	2027	N04	W33	.547	13964	4.4	34	-F		C	2010	50	.6	
62 CULG	06	2231	2343	0027	N05	W35	.577	13964	4.3	116	-F		P	2343	20	.2	
GRP63063	07	0110+6	0117+5	0131	N04	W36	.590	13964	4.3	21	-N						EHJ
CULG	07	0110	0117	0129	N04	W36	.590	13964	4.3	19	-N		C	0117	86	.9	
VORO	07	0116	0122	0133	N04	W36	.590	13964	4.4	17	1N		C	0122	188	2.4	EHJ
GRP63064	07	0136+3	0143+2	0150	N04	W37	.604	13964	4.3	14	-F				50	.6	DHJ
MANI	07	0136E	0144U	0150	N05	W37	.606	13964	4.3	140	-N	3	P	0144	50	.6	H
CULG	07	0137	0143	0148	N04	W37	.604	13964	4.3	11	-F		C	0143	40	.5	
VORO	07	0141	0145	0150	N04	W36	.590	13964	4.4	9	-F		C	0145	134	1.7	DHJ

Hα SOLAR FLARES

DECEMBER 1975

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1975 DEC	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
GRPE3065	07	0606+1	0609+0	0616	N05	W40	.646	13964	4.3	10	-N				60	.3	DH
MITK	07	0606		0609D	N05	W40	.646	13964	4.3	30	-N		P	0609	90	1.2	D
CULG	07	0617	0619	0616	N04	W40	.645	13964	4.3	9	-F		C	0619	40	.5	
MANI	07	0608E	0609U	0614D	N06	W39	.634	13964	4.3	60	-N	3	V	0609	40	.5	H
GRPE3066	07	1137+3	1139+1	1144	N05	W42	.672	13964	4.3	7	-N				60	.3	
HTPR	07	1137	1139	1143	N06	W42	.673	13964	4.3	6	-N		C	1139	60	.7	
CATA	07	1140	1140	1145	N05	W43	.685	13964	4.3	5	-N	1		1140	56	.8	
67 HTPR	07	1440	1441	1446	N08	W37	.612	13964	4.8	6	-F		C	1441	20	.2	
	07	1539	1625	NO FLARE PATROL													
	07	1650	1743	NO FLARE PATROL													
	07	1826	1839	NO FLARE PATROL													
	07	1950	1954	NO FLARE PATROL													
	07	2034	2053	NO FLARE PATROL													
	07	2155	2202	NO FLARE PATROL													
	08	1150	1200	NO FLARE PATROL													
	08	1205	1225	NO FLARE PATROL													
68 HTPR	08	1355E	1400	1415	N08	W50	.771	13964	4.8	200	-N		C	1400	50	.6	
GRPE3069	08	1416E	1416+1	1433	N05	W52	.790	13964	4.7	19	1F				200	3.3	
RAMY	08	1416E	1419U	1423D	N06	W52	.791	13964	4.7	30	1F	3	V		256		DE
RAMY	08	1416E	1418U	1433	N05	W52	.790	13964	4.7	150	-F	3	C		144		FDE
	08	1514	1522	NO FLARE PATROL													
	08	1607	1614	NO FLARE PATROL													
	08	1619	1637	NO FLARE PATROL													
	08	2000	2006	NO FLARE PATROL													
	08	2158	2205	NO FLARE PATROL													
70 CULG	08	2259	2301	2304	N04	W65	.907	13964	4.1	5	-F		C	2301	30	.7	
71 CULG	09	0039	0043	0048	N04	W66	.914	13964	4.1	9	-F		C	0043	20	.3	
	09	1700	1730	NO FLARE PATROL													
	10	1503	1632	NO FLARE PATROL													
72 MCMA	10	1727E		1753D	N03	W88	.999	13964	4.1	260	-F		C	1730			DH
	10	2225	2235	NO FLARE PATROL													
73 ARCE	11	0926E		0944D	N06	W90	1.000	13964	4.6	180	-N		C	0927	58		
	11	1503	1606	NO FLARE PATROL													
	11	1645	1649	NO FLARE PATROL													
	11	1658	1702	NO FLARE PATROL													
	11	2222	2340	NO FLARE PATROL													
	12	1205	1215	NO FLARE PATROL													
	12	1235	1245	NO FLARE PATROL													
	12	1300	1309	NO FLARE PATROL													
	12	1319	1355	NO FLARE PATROL													
	12	1421	1606	NO FLARE PATROL													
	12	1642	1733	NO FLARE PATROL													
	12	1800	1810	NO FLARE PATROL													
	12	1834	1905	NO FLARE PATROL													
	12	1907	1925	NO FLARE PATROL													
	12	2141	2204	NO FLARE PATROL													
	13	0331	0344	NO FLARE PATROL													
	13	1258	1318	NO FLARE PATROL													
	13	1345	1533	NO FLARE PATROL													
	13	1542	1543	NO FLARE PATROL													
	13	1918	2001	NO FLARE PATROL													
	13	2019	2320	NO FLARE PATROL													
	14	0323	0352	NO FLARE PATROL													
	14	1300	1310	NO FLARE PATROL													
	14	1315	1325	NO FLARE PATROL													
	14	1341	1351	NO FLARE PATROL													
	14	1355	1410	NO FLARE PATROL													
	14	1415	1423	NO FLARE PATROL													
	14	1434	1451	NO FLARE PATROL													
	14	1530	1632	NO FLARE PATROL													
	14	1605	1613	NO FLARE PATROL													
	14	1618	1642	NO FLARE PATROL													
	14	1645	1815	NO FLARE PATROL													
	14	1817	1835	NO FLARE PATROL													

Hα SOLAR FLARES

DECEMBER 1975

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1975 DEC	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
	14	1855	2000	NO FLARE PATROL													
	14	2154	2202	NO FLARE PATROL													
	14	2246	2301	NO FLARE PATROL													
	15	0218	0221	NO FLARE PATROL													
	15	0252	0256	NO FLARE PATROL													
	15	0503	0543	NO FLARE PATROL													
	15	0842	0850	NO FLARE PATROL													
74 CATA	15	0926	0935	0940C	S06	E20	.352	13984	15.9	15D	-N	1		0935	56	.6	
	15	1500	1503	NO FLARE PATROL													
	15	1525	1545	NO FLARE PATROL													
	15	1600	1611	NO FLARE PATROL													
	15	1650	1730	NO FLARE PATROL													
	15	1735	1841	NO FLARE PATROL													
	15	2225	2237	NO FLARE PATROL													
	16	1231	1303	NO FLARE PATROL													
	16	1319	1341	NO FLARE PATROL													
	16	1359	1450	NO FLARE PATROL													
	16	2211	2212	NO FLARE PATROL													
	17	0427	0442	NO FLARE PATROL													
	17	0444	0520	NO FLARE PATROL													
	17	0724	0757	NO FLARE PATROL													
	17	0815	0827	NO FLARE PATROL													
	17	1000	1021	NO FLARE PATROL													
	17	1036	1043	NO FLARE PATROL													
	17	1049	1057	NO FLARE PATROL													
	17	1117	1247	NO FLARE PATROL													
	17	1250	1445	NO FLARE PATROL													
	17	1618	1642	NO FLARE PATROL													
	17	1646	1708	NO FLARE PATROL													
	17	1713	1726	NO FLARE PATROL													
	17	1740	1742	NO FLARE PATROL													
	17	2236	2310	NO FLARE PATROL													
	18	0855	0901	NO FLARE PATROL													
	18	0915	0935	NO FLARE PATROL													
	18	1425	1435	NO FLARE PATROL													
	18	1535	1548	NO FLARE PATROL													
	18	1549	1601	NO FLARE PATROL													
	18	2239	2250	NO FLARE PATROL													
	19	0707	0720	NO FLARE PATROL													
	19	2240	2244	NO FLARE PATROL													
	19	2316	2330	NO FLARE PATROL													
	20	0401	0435	NO FLARE PATROL													
	20	1535	1536	NO FLARE PATROL													
	20	1610	1658	NO FLARE PATROL													
	20	1711	1737	NO FLARE PATROL													
	21	0545	0600	NO FLARE PATROL													
	21	0610	0618	NO FLARE PATROL													
	21	2032	2057	NO FLARE PATROL													
	21	2109	2112	NO FLARE PATROL													
	21	2229	2252	NO FLARE PATROL													
	22	0119	0120	NO FLARE PATROL													
	22	0434	0600	NO FLARE PATROL													
	22	0631	0739	NO FLARE PATROL													
	22	1619	1702	NO FLARE PATROL													
	22	2232	2338	NO FLARE PATROL													
	23	0105	0107	NO FLARE PATROL													
	23	0547	0552	NO FLARE PATROL													
	23	0710	0714	NO FLARE PATROL													
75 KHAR	23	0940E		1000C	S05	E90	1.000	13992	30.2	20D	?F		F				
	IMP.1	NO	MONT2	HTPR2	CATA2												
GRPE3076	23	1028+3	1035+0	1048	S05	E90	1.000	13992	30.2	20	1F						A
KHAR	23	1028E		1048C	S05	E90	1.000	13992	30.2	20D	1F		F				
CATA	23	1030	1035	1045	S04	E90	1.000	13992	30.2	15	1F	1		1035	56		
HTPR	23	1031	1035	1049	S05	E90	1.000	13992	30.2	18	-N		C	1035	30		A
	23	1907	1914	NO FLARE PATROL													
	23	1953	2013	NO FLARE PATROL													
	23	2148	2200	NO FLARE PATROL													
77 HTPR	24	1202	1205	1207	S13	W26	.463	13994	22.6	5	-F		C	1205	40	.4	
	24	1520	1529	NO FLARE PATROL													
	24	1535	1540	NO FLARE PATROL													

Hα SOLAR FLARES

DECEMBER 1975

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1975 DEC	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		CONC	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
	24	1757	1808	NO FLARE PATROL													
78 BOUL	24	1943	1946	2008	S12	W29	.506	13994	22.6	25	-F	2	C	1946	42	.5	
	25	1245	1246	NO FLARE PATROL													
	25	1413	1508	NO FLARE PATROL													
	25	2137	2133	NO FLARE PATROL													
	25	2321	2335	NO FLARE PATROL													
	26	1506	1508	NO FLARE PATROL													
	26	1521	1528	NO FLARE PATROL													
	26	2208	2220	NO FLARE PATROL													
	26	2236	2335	NO FLARE PATROL													
	27	1016	1020	NO FLARE PATROL													
	27	1105	1109	NO FLARE PATROL													
	27	1117	1125	NO FLARE PATROL													
	27	1522	1528	NO FLARE PATROL													
	27	1531	1535	NO FLARE PATROL													
	27	1554	1613	NO FLARE PATROL													
	27	1713	1905	NO FLARE PATROL													
	28	1534	1552	NO FLARE PATROL													
	28	1615	1633	NO FLARE PATROL													
	28	1646	1707	NO FLARE PATROL													
	28	1936	1959	NO FLARE PATROL													
	29	2314	2339	NO FLARE PATROL													
	29	2343	2349	NO FLARE PATROL													
	30	0425	0458	NO FLARE PATROL													
	30	0510	0520	NO FLARE PATROL													
	30	0535	0556	NO FLARE PATROL													
	30	1535	1612	NO FLARE PATROL													
	30	1642	1936	NO FLARE PATROL													
	30	1939	1953	NO FLARE PATROL													
	30	2041	2056	NO FLARE PATROL													
	30	2112	2118	NO FLARE PATROL													
	30	2220	2236	NO FLARE PATROL													
	30	2246	2300	NO FLARE PATROL													
	30	2327	2330	NO FLARE PATROL													
	31	0525	0535	NO FLARE PATROL													
	31	1447	1516	NO FLARE PATROL													
	31	2009	2033	NO FLARE PATROL													
	31	2142	2330	NO FLARE PATROL													

"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

DAILY FLARE INDICES
Includes all Flares

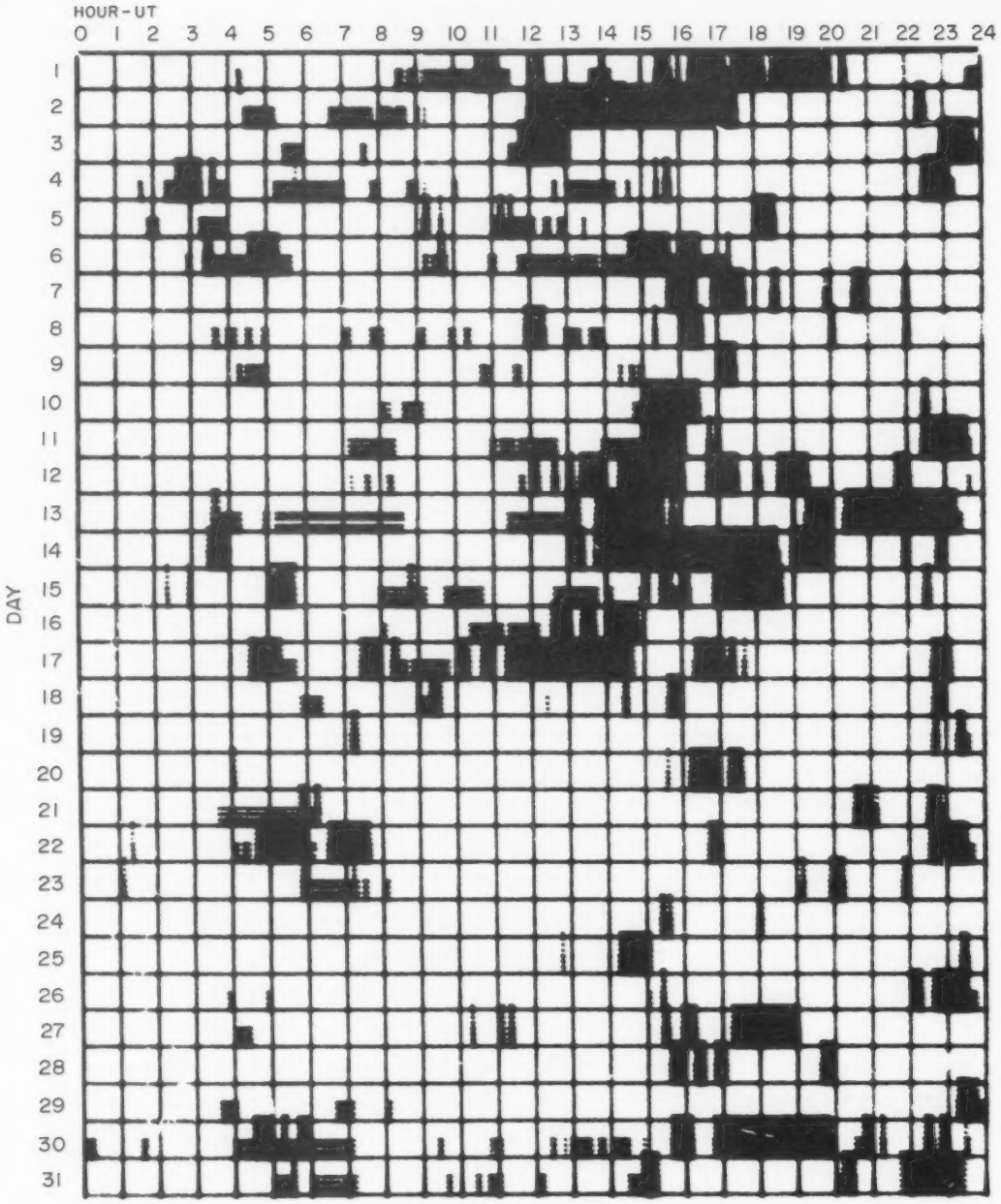
Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.
751201	0.00	19.4	751211	.91	21.5	751221	0.00	22.8
751202	0.00	18.5	751212	0.00	19.9	751222	0.00	20.0
751203	1.37	21.9	751213	0.00	17.8	751223	3.39	23.1
751204	5.51	22.2	751214	0.00	17.5	751224	6.80	23.6
751205	52.78	22.9	751215	5.70	20.5	751225	0.00	22.8
751206	17.64	20.9	751216	0.00	22.2	751226	0.00	22.7
751207	12.36	21.6	751217	0.00	16.6	751227	0.00	21.3
751208	23.99	22.7	751218	0.00	22.7	751228	0.00	22.7
751209	.86	23.5	751219	0.00	23.4	751229	0.00	23.5
751210	.88	22.4	751220	0.00	22.7	751230	0.00	16.3
						751231	0.00	21.2

When no Flare Index is given, it is 0 for that day.

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

DECEMBER 1975



Observatories included in total patrol:

Abastumani	Culgoora	Kharkov	Meudon	Tehran
Arcetri	Haute Provence	Kodaikanal	Mitaka	Upice
Athenes	Herstmonceux	Locarno	Monte Mario	Voroshilov
Boulder	Huancayo	Lvov	Palehua	Wendelstein
Bucharest	Hurbanovo	Manila	Ramey	Zürich
Catania	Istanboul	McMath-Hulbert	Tachkent	

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
DECEMBER 1975

DEC 1975	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
1	9240	ARCE	3	1336.5	1337	1.3				
	9240	ARCE	41	1336.5	1337	11.5				
	9240	ARCE	1	1342 U	1342.7	1.4U				
	9240	ARCE	1	1346.1	1346.4	0.7				
	9240	ARCE	1	1347.4	1346.6	0.6				
2	500	HIRA	3 S	0621	0621.6	0.7	39	23		
	500	HIRA	3 S	0622.2	0622.2	0.4	31	16		
	3100	CRIM	24 R	0827	1131		3			
	9240	ARCE	3	0902.4	0902.5	0.8				
	9240	ARCE	40	1027.5	1028.4	2.6				
	9240	ARCE	1	1426.3	1426.7	1				
	9240	ARCE	1	1431.3	1431.5	0.8				
3	100	HIRA	45 C	0022.7	0023.4	1	600	250		SLWR
	100	HIRA	45 C	0048	0048.6	1	350	100		SRSL
	260	ONDR	43 NS	0810 E		360 D	17			
	127	TORN	41 F	0957.4	1000.3	8	12	2		
4	260	ONDR	8 S	0911.8	0911.8	0.2	10			
	9240	ARCE	2	1034.6	1034.7	0.7				
	9240	ARCE	41	1034.6	1041.7	8.3				
	9240	ARCE	1	1035.8	1035.9	1.6				
	9240	ARCE	45	1040.9	1041.7	2				
	9240	ARCE		1040.9	1041.2	0.7				
	9240	ARCE		1041.6	1041.7	1.3				
	9240	ARCE	29	1350.4		5 U				
	9240	ARCE	3	1350	1350.2	0.4				RECORD DISTUR
	9240	ARCE	3	1403	1403.4	1.4				
	2800	OTTA	24O R	1702	1720	18	1.2	0.6		
	2800	OTTA	24P R	1720		220 D	1.2			
5	510	POTS	45 C	0731	0750	55	28	4		
	1415	MANI	4 S/F	0743.1	0748.2	36.9	18.8	9		
	2695	MANI	4 S/F	0743.1	0748.6	34.9	19.6	5.6		
	4995	MANI	4 S/F	0743.2	0750	34.8	16.6	4.6		
	8800	MANI	4 S/F	0743.5	0750	35.5	24.5	11.2		
	2695	ATHN	4 S/F	0744.3	0749.8	28	10	5.4		
	4995	ATHN	3 S	0744.4	0750	29.5	10.7	3.2		
	606	MANI	41 F	0746.4	0810.5	33.6	108	16.5		
	8800	ATHN	3 S	0746.5	0750.8	25.5	11	3.3		
	550	KIEV	6 S	0747 E	0749.2	4.5	38	19		
	234	POTS	45 C	0748	0831	120	22	4		
	113	POTS	45 C	0751	0805	105	50	7		
	550	KIEV	46 C	0752	0806.5	23.7	25	41		
	550	KIEV		0752	0759.7	6 U	20			
	550	KIEV		0752	0755.5	1	12			
	550	KIEV		0752	0811	1.3	11			
	127	TORN	45 C	0755 U	0805.5U	18	60 D	10 U		OFF SCALE
	127	TORN	25 R	0755 U	0840.5	380 D	45			
	127	TORN	43 NS	0755 U		380 D				
	260	ONDR	43 NS	0820 E		150	21	8		
	100	GORK	44 NS	0906 E		144 D		5		
	200	GORK	44 NS	0913 E		137 D		5		
	1470	BERL	4	0800 E	0806.5	19 D	15			
	3000	BERL	4	0800 E	0806.7	18 D	10			
	221	ABST	45 C	0826	0830.8	8	23	12		
	2800	OTTA	20 GRF	1900	1918	50	1.2	0.6		
6	100	GORK	44 NS	0625 E		185		5		
	200	GORK	44 NS	0625 E		213		5		
	127	TORN	44 NS	0730 E		40 D				INCOMPLETE
	550	KIEV	41 F	0956.8	0958.7	2.5	11			
	550	KIEV	6 S	1003	1018.6	1.2	17			
	260	ONDR	4 S/F	1018.2	1018.3	0.5	84			
	200	GORK	8 S	1018.3	1018.8	1.2	85	40		
	1470	BERL	2	1116.5	1118.6	3.5	3.8	1.2		
	260	ONDR	4 S/F	1118.6	1119	1	37			
	33	UPIC	46 C	1118.6	1120.1	2.2				
	29	UPIC	46 C	1118.7	1119.7	2				
	200	GORK	8 S	1118.7	1119.6	2.3	150 D			
	127	TORN	5 S	1118.8	1119.5	2	30 D	15 D		OFF SCALE
	113	POTS	45 C	1118.9	1119.2	0.9	300	30		
	100	GORK	8 S	1118.9	1119.6	1.8	400			
	2800	OTTA	20 GRF	1740	1746	20	0.8	0.4		
	410	SGMR	6 S	1743.8	1745.5	2.8	25.4	10.1		
	245	SGMR	6 S	1744.6	1745.5	2.4	1.8	.7		
	200	HIRA	45 C	2242	2242.3	1	30	15		WL
7	207	VORO	43 NS	0000	0120	110	10			
	100	HIRA	41 F	0111	0117 U	11	2000 D			MR
	200	HIRA	41 F	0111	0116.6U	11	370 D			SL
	500	HIRA	45 C	0115.6	0117	1.5	30	9		
	606	MANI	4 S/F	0116.6	0118	2.4	21.6	4.3		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
DECEMBER 1975

DEC 1975	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
	1415	MANI	4 S/F	0117	0117.4	4.4	11.7	3.7		
	200	HIRA	45 C	0136	0136.5	1.5	100	60		SL
	100	HIRA	45 C	0136	0136.5	1.5	500	250		WRWL
	3750	TYKW	5 S	0136	0136.4	4	1.5	0.50		OR
	2000	TYKW	5 S	0136	0136.4	2	1.7	0.5		
	207	VORO	4 S/F	0136	0137	2	110			
	221	ABST	45 C	0604	0605	8	27	11		
	100	HIRA	45 C	0604.8	0606.7	2.3	240	150		MRWL
	200	HIRA	45 C	0605	0605.4	2	30	15		WL
	221	ABST	6 S	0731.8	0732	0.5	59			
	260	ONDR	42 SER	0959	1006.5	17	4			
	33	UPIC	8 S	1135.8	1135.9	0.3				
	29	UPIC	8 S	1135.9	1136	0.3				
	245	SGMR	43 NS	1358.7	1531.2	338.4	37.8			
8	550	KIEV	41 F	1026	1027	4.4	29			
	260	ONDR	8 S	1321.3	1321.3	0.2	6			
	2800	OTTA	27 RF	1330		380	4	3		
	2800	OTTA	24 R	1330	1355	25	4	2		
	2400	OTTA	24P R	1355		185	4			
	606	SGMR	2 S/F	1419.3	1420.2	5.1	7.9	2.4		
	410	SGMR	6 S	1419.8	1420.2	4.4	31.5	9.5		
	2800	OTTA	26 FAL	1700	1950	170	-2	-1		
9	550	KIEV	6 S	0656	0657.5	1	24			
	9240	ARCE	2	1150.4	1150.5	1.2				
10	720	SYDN	4 S	0201.8	0203	1.8				
	720	SYDN	4 S	0205.3	0205.5	0.3				
	720	SYDN	3 S	0211.5	0211.7	1.5				
	720	SYDN	40 F	0227	0228	1.8				
	720	SYDN	2 S/F	0315.7	0315.9	0.3				
	720	SYDN	3 S	0330.2	0334	4.2				
	720	SYDN	40 F	0431.5	0432.2	2.5				
	9240	ARCE	1	0854.6	0854.7	0.7				
	9240	ARCE	1	0901.2	0901.3	1.2				
	127	TORN	40 F	1308	1310.3	4	10			
	9240	ARCE	3	1452.6	1453.2	1.8				
11	720	SYDN	40 F	0240	0311.7	43				
	9240	ARCE	22	1211.6	1232.8	74				
12	550	KIEV	41 F	0756	0756.2	2.7	15			
	260	ONDR	4 S/F	0828	0828.7	1.5	6	1.5		
	260	ONDR	8 S	1145.6	1145.6	0.3	115			
13	9240	ARCE	22	1220.9	1234.7	65				
14	260	ONDR	8 S	0949.2	0949.2	0.2	22			
15	9240	ARCE	1	1102.7	1102.8	0.8				
16	720	SYDN	40 F	0344.7	0353.1	12.3				
17	720	SYDN	40 F	0204.6	0208.7	4.5				
18	9240	ARCE	23	1205	1253.3	118				
	9240	ARCE	2	1307.2	1307.6	1				
	9240	ARCE	4	1508.3	1509	1.5				AT SUNSET
19	9240	ARCE	21	0952	1005	77				
	1420	ARCE	20	1002.2	1035.8	83				
	9240	ARCE	1	1030.2	1030.3	0.7				
21	127	TORN	40 F	0941.5	0945.1	6	6	2		
22	720	SYDN	4 S	0200.2	0200.4	0.7				
	720	SYDN	3 S	0219.4	0219.6	1.4				
	4995	ATHN	1 S	0640.3	0641	1	2.3	.7		
	8800	ATHN	1 S	0640.4	0641	1.3	9	2.7		
	8800	ATHN	20 GPF	0730.2	0735.7	10.6	4.5	2.7		
	9240	ARCE	3	1434.1	1434.8	1.2				
23	550	KIEV	1 S	0846.8	0847.2	0.5	3			
	550	KIEV	2 S/F	0850.2	0850.3	1	4			
	2695	BOUL	1 S	1936.5	1937	2.5	3	1		
24	2800	OTTA	24 R	1740	1745	5	0.8	0.4		
	2800	OTTA	27 RF	1740		135	0.8	0.7		
	2800	OTTA	24P R	1745		120	0.8			
	2800	OTTA	26 FAL	1945	1955	10	-0.8	-0.4		
25	2695	BOUL	1 S	1937	1938.5	2.5	4	1		
	4995	BOUL	1 S	1939	1940	2	4	1		
26	550	KIEV	6 S	0839.8	0840.3	1.2	2			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

DECEMBER 1975

DEC 1975	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
27	3100	CRIM	45 C	0706.5	0708	8	2	1		
	3100	CRIM		0706.5	0713.5		3			
	1470	BERL	40	1329.4	1330	3.6	2.7			
	3000	BERL	40	1329.5	1330	3.5	6.9			
	9500	BERL	40	1329.5	1330	3.5	13			
29	720	SYDN	3 S	0122	0122.1	0.8				
	720	SYDN	1 S	0136.5	0136.8	6				
31	260	ONDR	8 S	1053.5	1054.2	1	10	2		
	4995	BOUL	1 S	1839.5	1840.5	2.5	6	3		
	2695	BOUL	45 C	1839.5	1841.5	5	2	1		
	4995	BOUL	1 S	1939.5	1941	2.5	8	3		
	2695	BOUL	1 S	1940.5	1942.5	2.5	2	1		

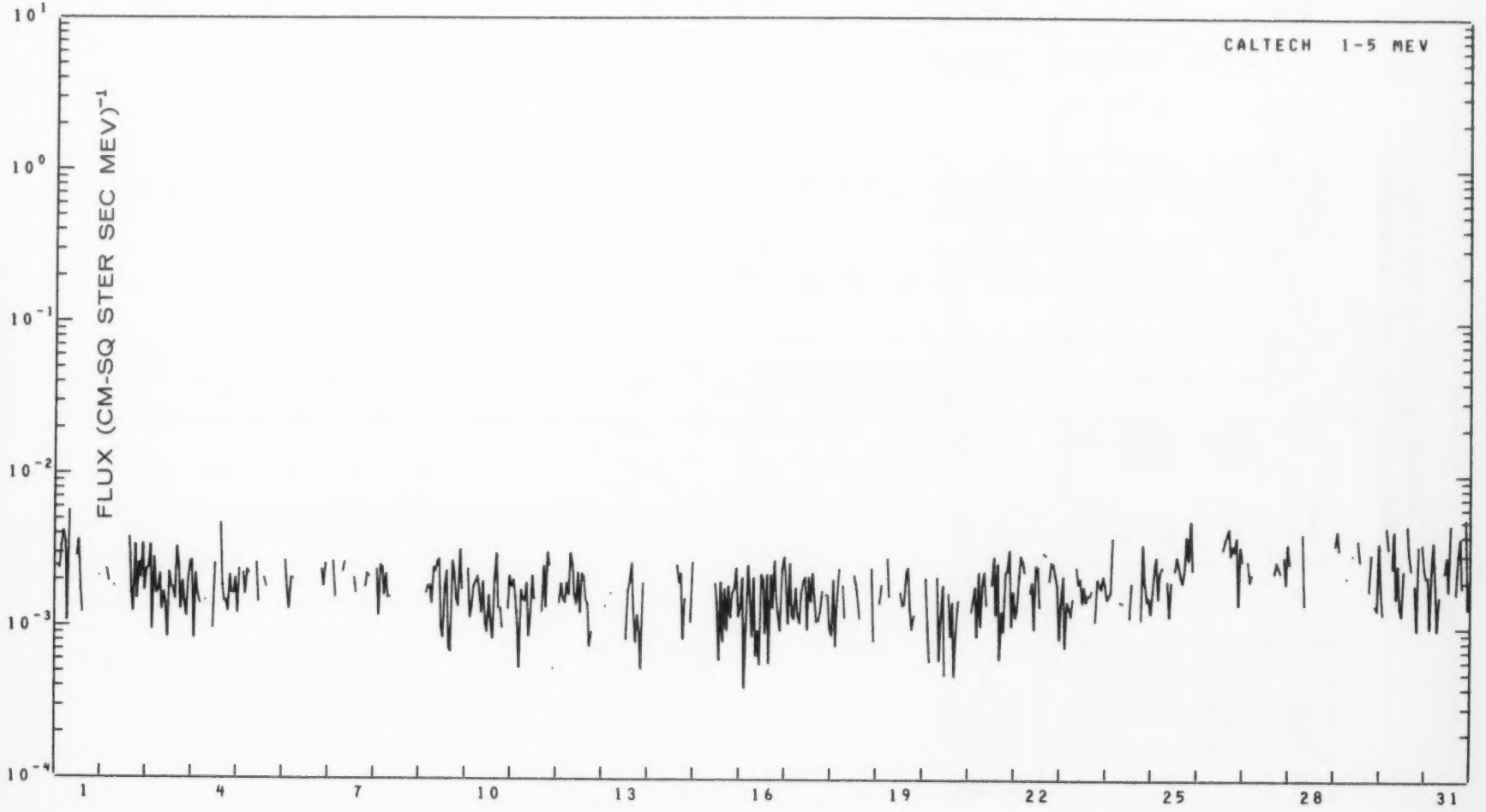
Reports received from the following observatories:

ABST = Abastumani
ARCE = Arcetri
BERL = Berlin-Adlershof
BORD = Bordeaux
BOUL = Boulder
CRIM = Simferopol
DWIN = Dwingeloo
GORK = Gorky
HIRA = Hiraiso
HUAN = Huancayo
KIEV = Kiev
MANI = Manila
MCMA = McMath-Hulbert
ONDR = Ondrejov
OTTA = Ottawa
PENT = Penticton
POTS = Potsdam
SAOP = Sao Paulo
SGMR = Sagamore Hill
SYDN = Sydney
TORN = Torun
TYKW = Toyokawa
TRST = Trieste
UPIC = Upice
VORO = Voroshilov (Ussurisk)

IMP 7 AND 8 ELECTRONS

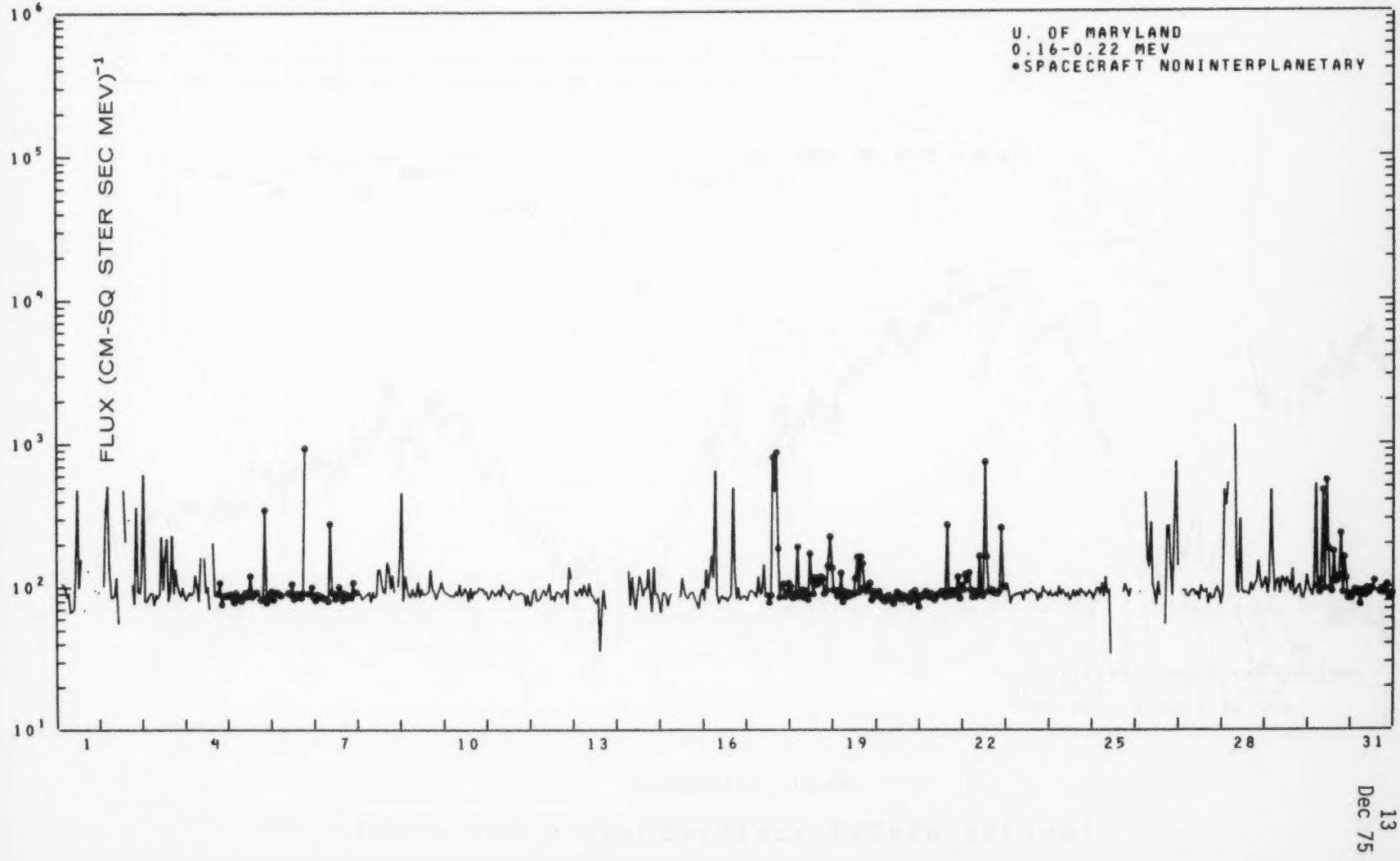
DECEMBER, 1975

12 Dec 75



IMP 7 AND 8 LOW ENERGY PROTONS

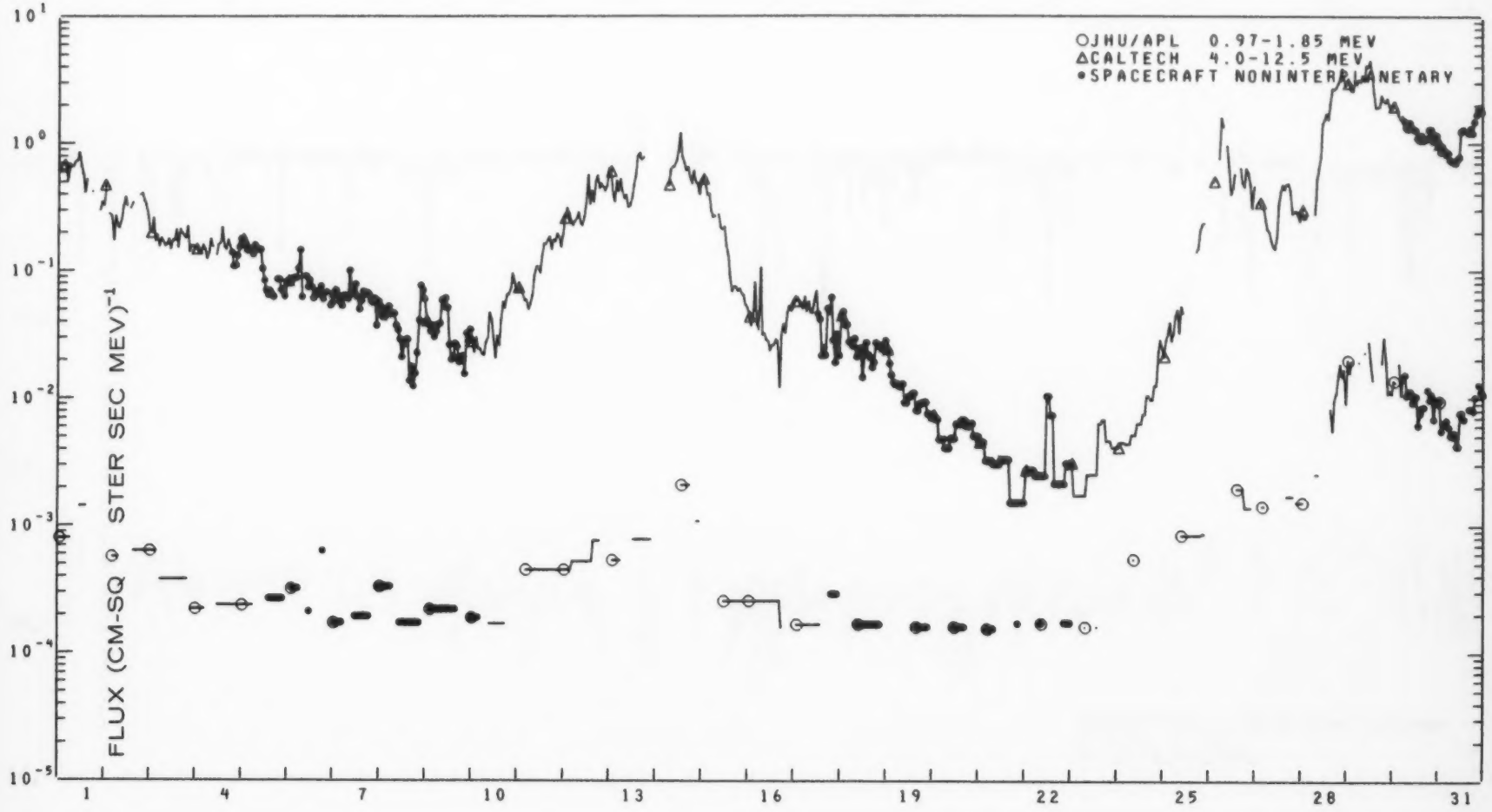
DECEMBER, 1975



IMP 7 AND 8 INTERMEDIATE ENERGY PROTONS

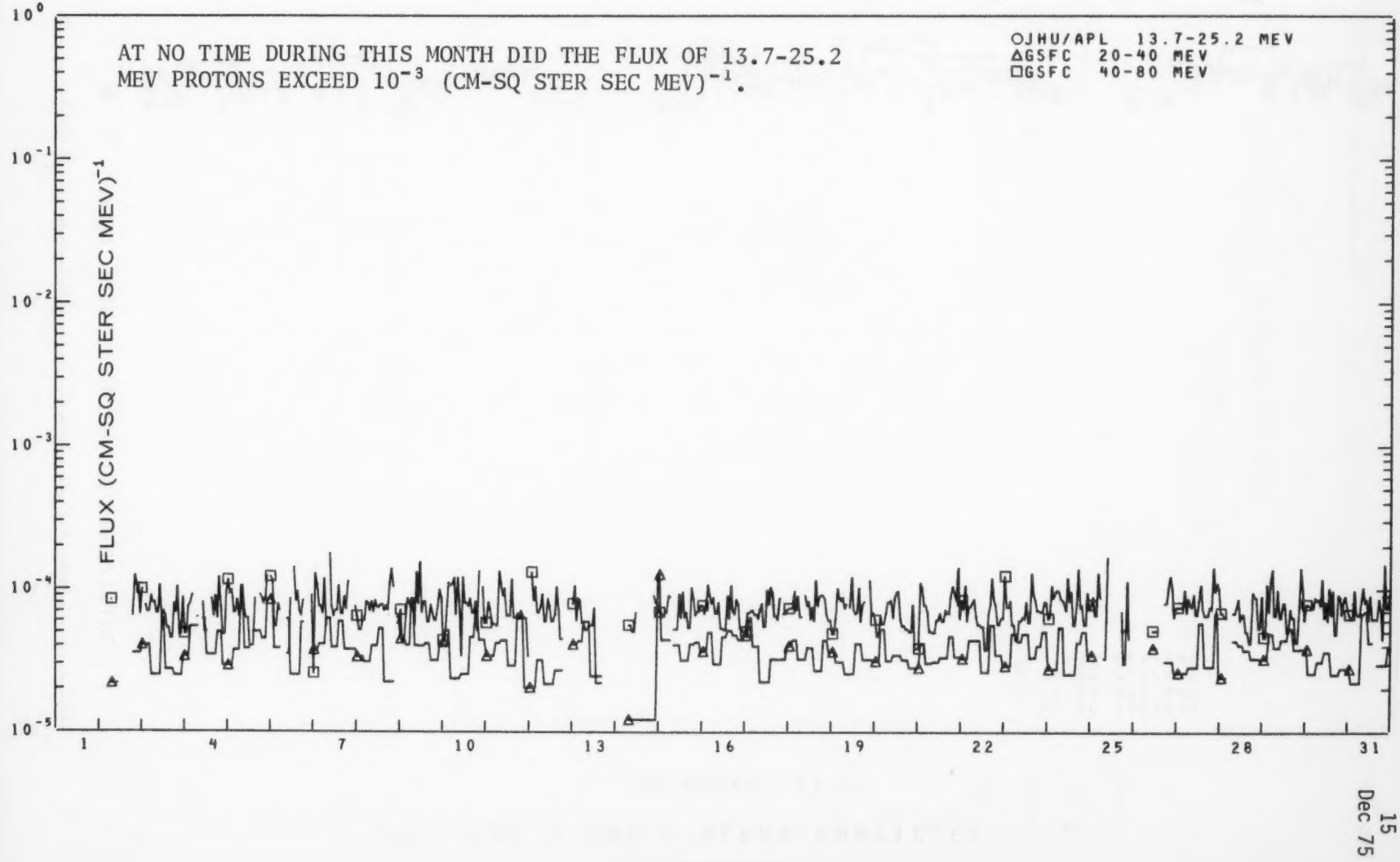
DECEMBER, 1975

14
Dec 75



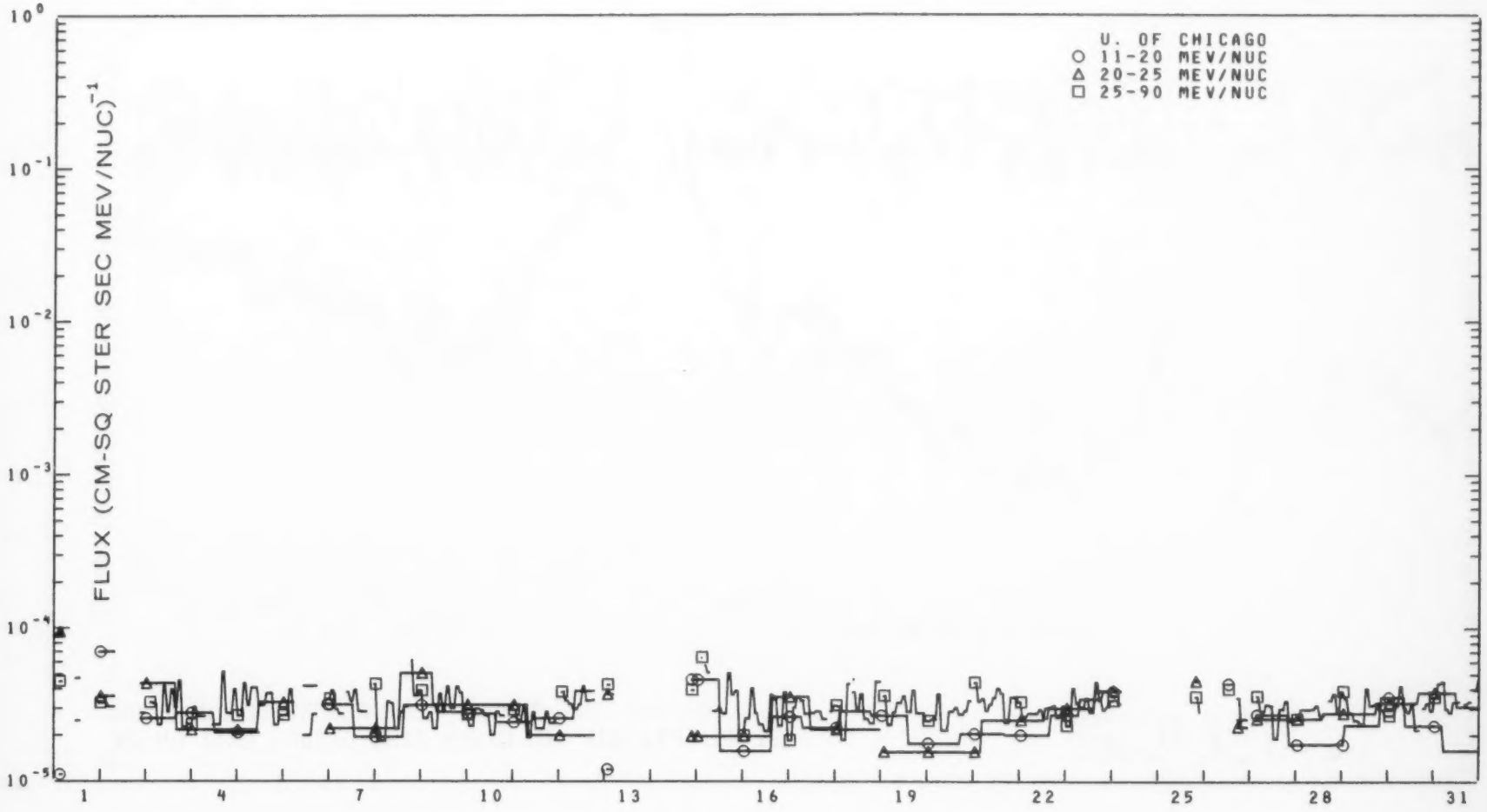
IMP 7 AND 8 HIGH ENERGY PROTONS

DECEMBER, 1975



IMP 7 AND 8 ALPHA PARTICLES

DECEMBER, 1975



NOVEMBER 1975 DATA

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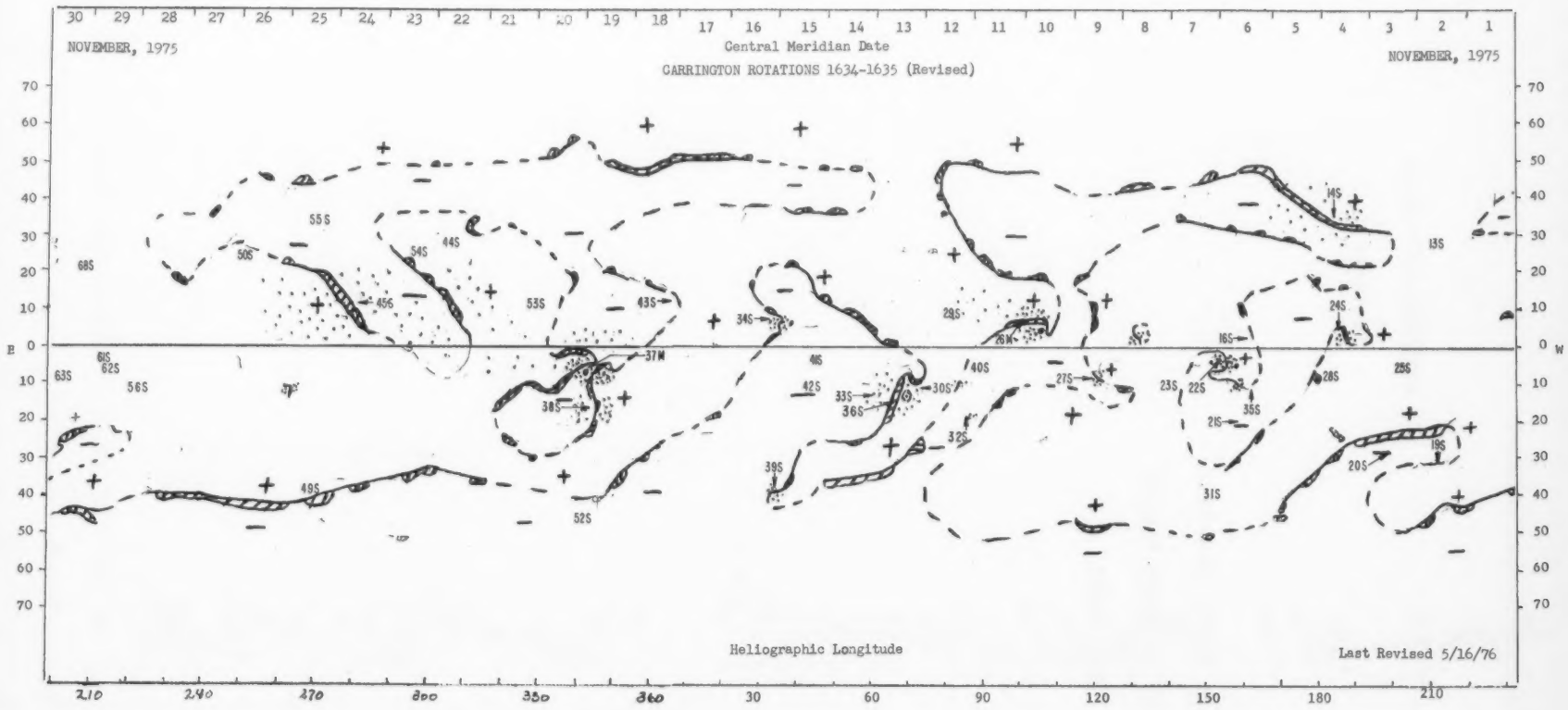
ABBREVIATED CALENDAR RECORD

Hα SYNOPTIC CHART

NOVEMBER 1975



ABBREVIATED CALENDAR RECORD

Nov. 1, 1975

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
FLARES																										
Bursts	cm																									
	dm																									
	m																									
	Dkm																									
SID																										
X-Rays																										
Ap 7Q	Kp	1+				1+				2-				2+				2-				1o				1-				3+
	sc																									
Aurora	USSR																									
	W.E.	ϕ = 60° 2250 (glow) central Scotland																								
Cosmic Rays																										
Green Corona		E. Limb 7 days earlier: NE-								SE-							W. Limb 7 days later: NW-								SW-	
Indices		Rz: 0 (Final)				IOcm flux: 72				Flare: 0/22.8				Ca: no data			Ip: 0						Ia: 1			
Solar Regions																										
Sunspots																										

Nov. 2, 1975

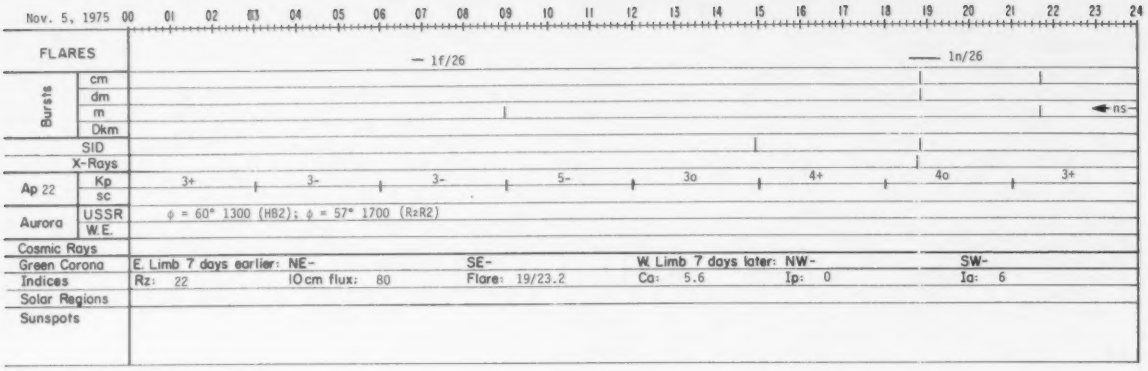
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
FLARES																										
Bursts	cm																									
	dm																									
	m																									
	Dkm																									
SID																										
X-Rays																										
Ap 36D	Kp	2+				3o				2o				3+				4-				4o				7-				6o
	sc																									
Aurora	USSR																									
	W.E.	ϕ = 60° 1830-0600 central Scotland; ϕ = 56° 1830 (glow) central England; ϕ = 59° (glow) central Scotland																								
Cosmic Rays																										
Green Corona		E. Limb 7 days earlier: NE-								SE							W. Limb 7 days later: NW-								SW-	
Indices		Rz: 0				IOcm flux: 73				Flare: 0/24.0				Ca: 3.5			Ip: 0						Ia: 2			
Solar Regions		(13919) S30						(13913) N28																		
Sunspots																										

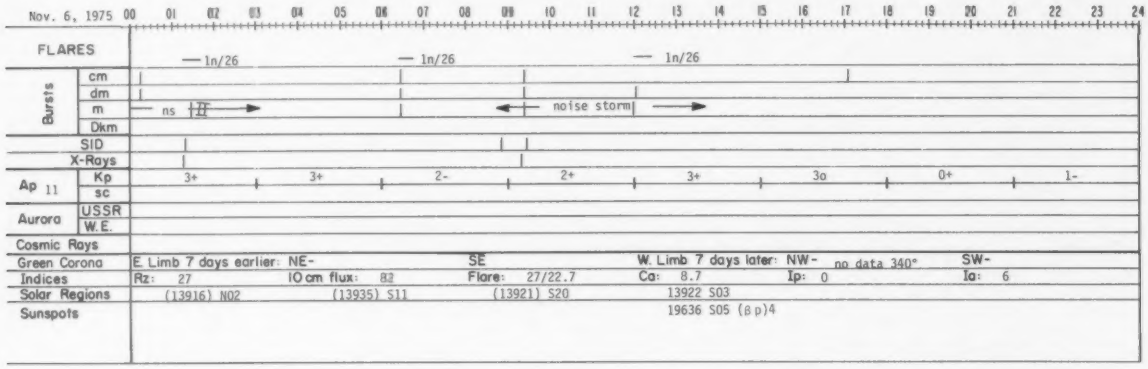
Nov. 3, 1975

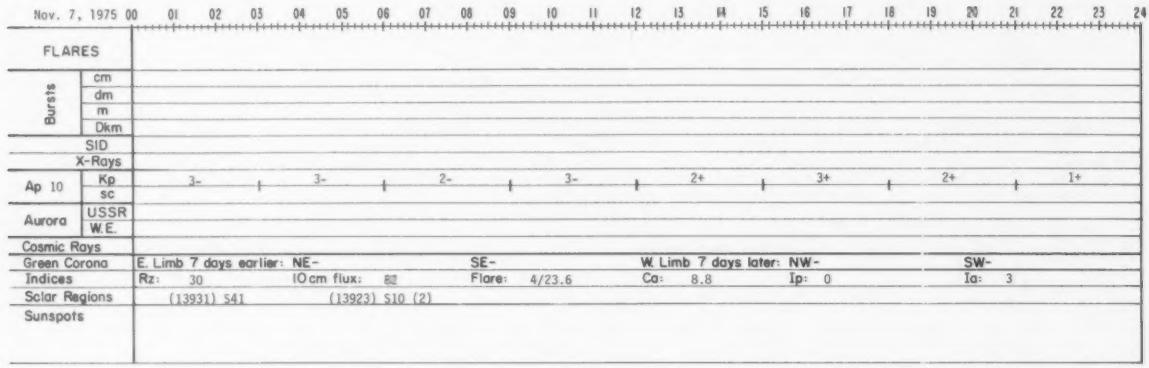
		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
FLARES																										
Bursts	cm																									
	dm																									
	m																									
	Dkm																									
SID																										
X-Rays																										
Ap 65D	Kp	6o				6-				6-				5+				5o				6o				6-				5+
	sc																									
Aurora	USSR	ϕ = 61° 1200 (R_2B2); ϕ = 60° 1100-1800 (HB2); ϕ = 58° 1900 (RR2)																								
	W.E.	ϕ = 60° 0000-0600 central Scotland; ϕ = 59° 0150(R) central Scotland; ϕ = 60° 0250(R) central Scotland with early part of display *																								
Cosmic Rays																										
Green Corona		E. Limb 7 days earlier: NE-								SE-							W. Limb 7 days later: NW-								SW-	
Indices		Rz: 7				IOcm flux: 74				Flare: 0/21.0				Ca: no data			Ip: 0						Ia: 6			
Solar Regions		(13925) S05						(13920) S28																		
Sunspots																										
		* Aurora W.E. continued: obscured by cloud; ϕ = 59° 1750-1810 (R glow) and 1810-2200 (glow) central Scotland.																								

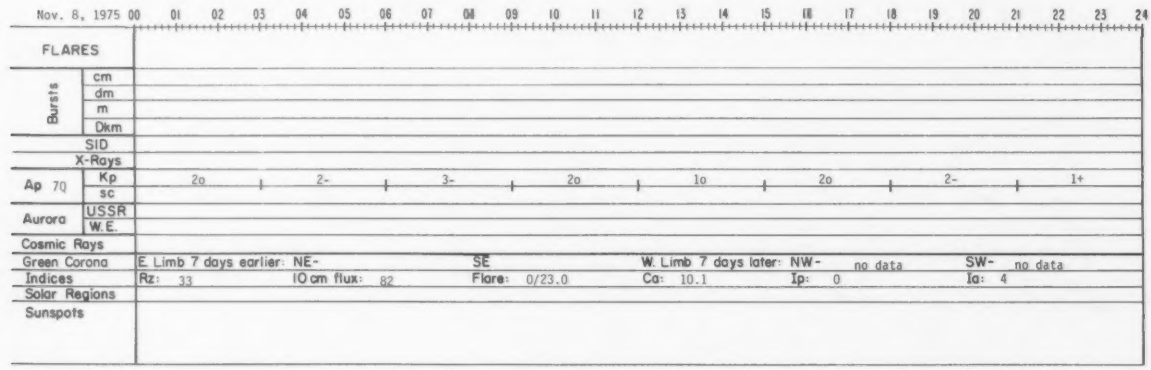
Nov. 4, 1975

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
FLARES																										
Bursts	cm																									
	dm																									
	m																									
	Dkm																									
SID																										
X-Rays																										
Ap 41D	Kp	5+				5+				5o				5o				5o				4+				4o				3-
	sc																									
Aurora	USSR	ϕ = 60° 1400-1800 (HB2)																								
	W.E.																									
Cosmic Rays																										
Green Corona		E. Limb 7 days earlier: NE-								SE							W. Limb 7 days later: NW-								SW-	
Indices		Rz: 18				IOcm flux: 77				Flare: 9/24.0				Ca: 2.4			Ip: 0						Ia: 7			
Solar Regions		13924 N04						13914 N34 (2)						(13928) S08												
Sunspots		19637 N04 (Bf)2																								


Nov. 5, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
— 1f/26
— 1n/26
Bursts
cm
dm
m
Dkm
ns
SID
X-Rays
Ap 22
Kp
3+ 3- 3- 5- 3o 4+ 4o 3+
sc
Aurora
USSR
φ = 60° 1300 (HB2); φ = 57° 1700 (R2R2)
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices
Rz: 22 10cm flux: 80 Flare: 19/23.2 Ca: 5.6 Ip: 0 Ia: 6
Solar Regions
Sunspots


Nov. 6, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
— 1n/26
— 1n/26
— 1n/26
Bursts
cm
dm
m
Dkm
ns
noise storm
SID
X-Rays
Ap 11
Kp
3+ 3+ 2- 2+ 3+ 3o 0+ 1-
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- no data 340° SW-
Indices
Rz: 27 10cm flux: 82 Flare: 27/22.7 Ca: 8.7 Ip: 0 Ia: 6
Solar Regions
(13916) N02 (13935) S11 (13921) S20 13922 S03
Sunspots
19636 S05 (β p)4


Nov. 7, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
SID
X-Rays
Ap 10
Kp
3- 3- 2- 3- 2+ 3+ 2+ 1+
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices
Rz: 30 10cm flux: 82 Flare: 4/23.6 Ca: 8.8 Ip: 0 Ia: 3
Solar Regions
(13931) S41 (13923) S10 (2)
Sunspots


Nov. 8, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
SID
X-Rays
Ap 70
Kp
2o 2- 3- 2o 1o 2o 2- 1+
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 33 10cm flux: 82 Flare: 0/23.0 Ca: 10.1 Ip: 0 Ia: 4
Solar Regions
Sunspots

Nov. 9, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 37	Kp	2o | 3+ | 5- | 4- | 4o | 6- | 6+ | 4-
	sc	
Aurora	USSR	ϕ = 60° 1500-1800 (HB 1-2)
	W.E.	ϕ = 64° overhead, visible to ϕ = 59° 1747-2400 (RA and B and R glow with rays fading by 1950) central Scotland. Increasing cloud *
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- no data 5° SE- no data 140° W. Limb 7 days later: NW- no data SW- no data
Indices		Rz: 30 10cm flux: 80 Flare: 1/21.6 Ca: 9.4 Ip: 0 Ia: 2
Solar Regions		13927 S08
Sunspots		(19639) S08 (αp)1
		* Aurora W.E. continued: hampered full observation but aurora remained visible at ϕ = 60° to 2400.

Nov. 10, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

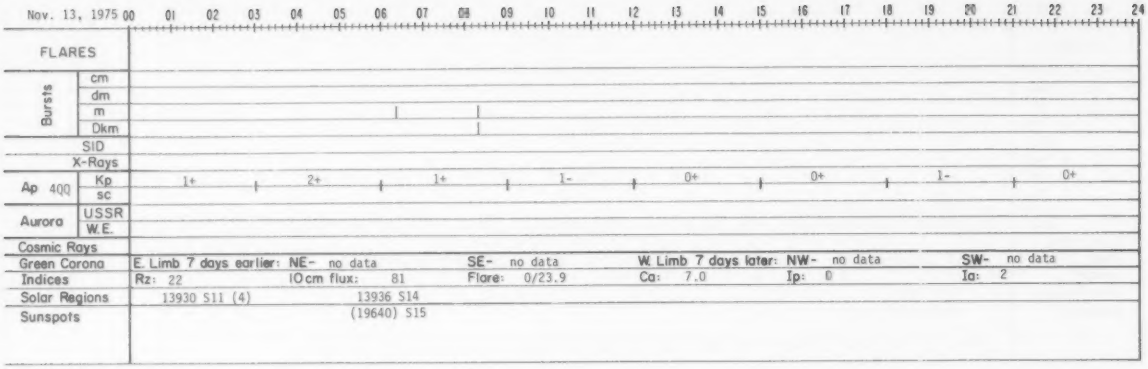
FLARES		
Bursts	cm	| | | |
	dm	| | | | |
	m	| | | | |
	Dkm	
SID		
X-Rays		
Ap 20	Kp	3o | 2- | 2- | 3- | 3- | 3- | 4o | 6-
	sc	
Aurora	USSR	ϕ = 58° 1900 (R_1R2) and 2100 (HB2); ϕ = 57° 2200 (R_2R3)
	W.E.	ϕ = 59° 2150 (PR) and ϕ = 60° 2150-2400 (glow) central Scotland
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- SW-
Indices		Rz: 26 10cm flux: 80 Flare: 27/22.3 Ca: 9.5 Ip: 0 Ia: 0
Solar Regions		13926 N06 (2)
Sunspots		19638 N03 (αp)5

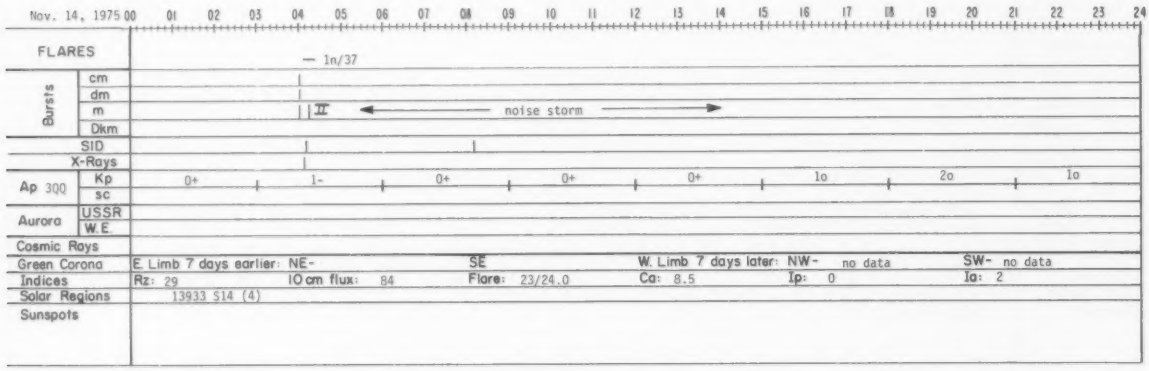
Nov 11, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

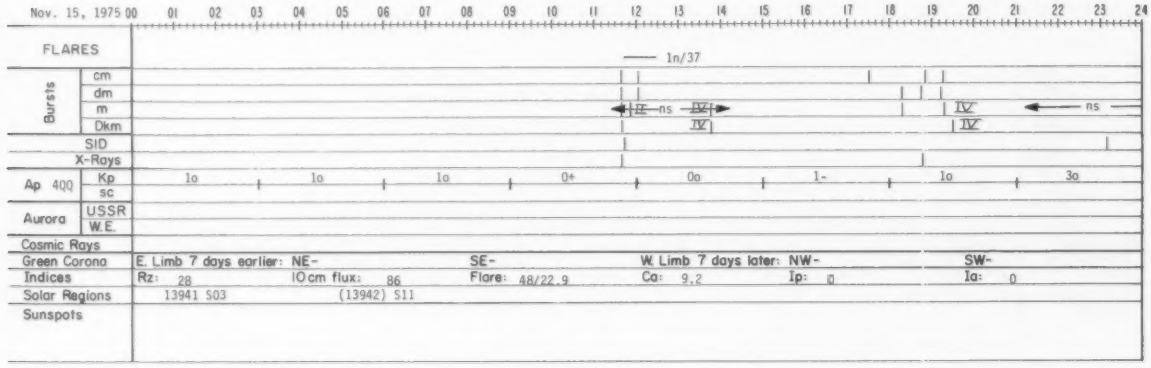
FLARES		
Bursts	cm	|
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 13	Kp	4o | 3- | 2+ | 3- | 2o | 3- | 3o | 3-
	sc	
Aurora	USSR	
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices		Rz: 30 10cm flux: 80 Flare: 7/23.8 Ca: 11.2 Ip: 0 Ia: 4
Solar Regions		(13940) S05
Sunspots		

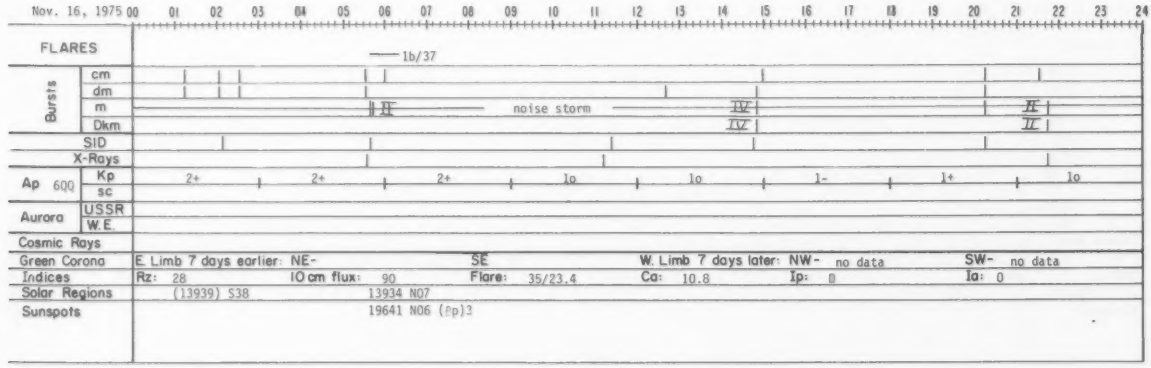
Nov. 12, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

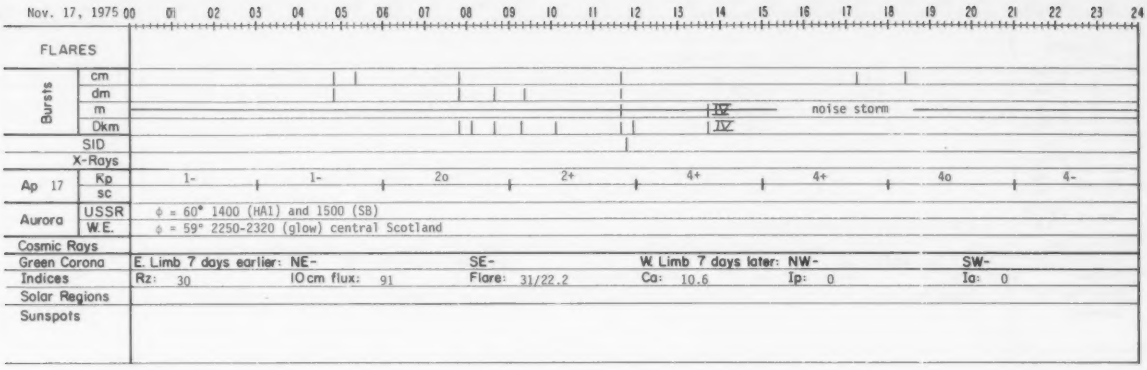
FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 9	Kp	4- | 3- | 2o | 2- | 1+ | 2o | 2o | 2-
	sc	
Aurora	USSR	
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- no data SW- no data
Indices		Rz: 24 10cm flux: 82 Flare: 14/23.7 Ca: 9.7 Ip: 0 Ia: 1
Solar Regions		(13932) S19 (13929) N09
Sunspots		

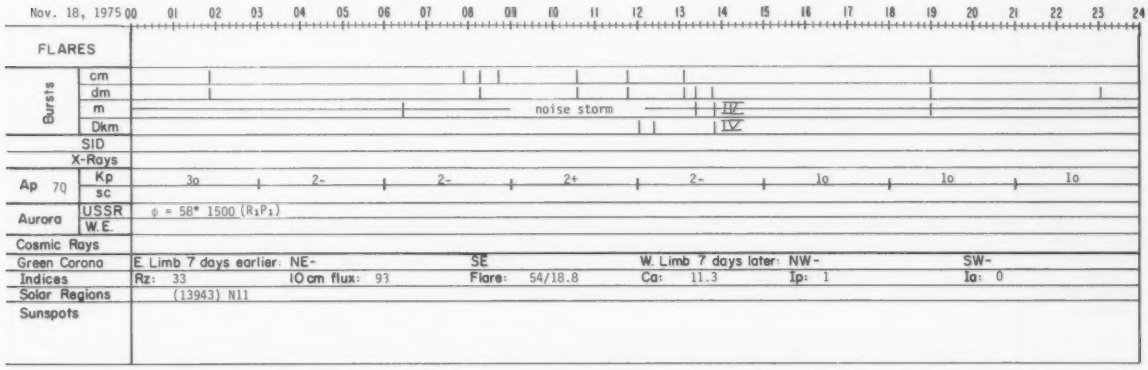

Nov. 13, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
SID
X-Rays
Ap 400
Kp
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
Indices
Solar Regions
Sunspots
1+ 2+ 1+ 1- 0+ 0+ 1- 0+
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- no data SW- no data
Rz: 22 10cm flux: 81 Flare: 0/23.9 Ca: 7.0 Ip: 0 Ia: 2
13930 S11 (4) 13936 S14
(19640) S15

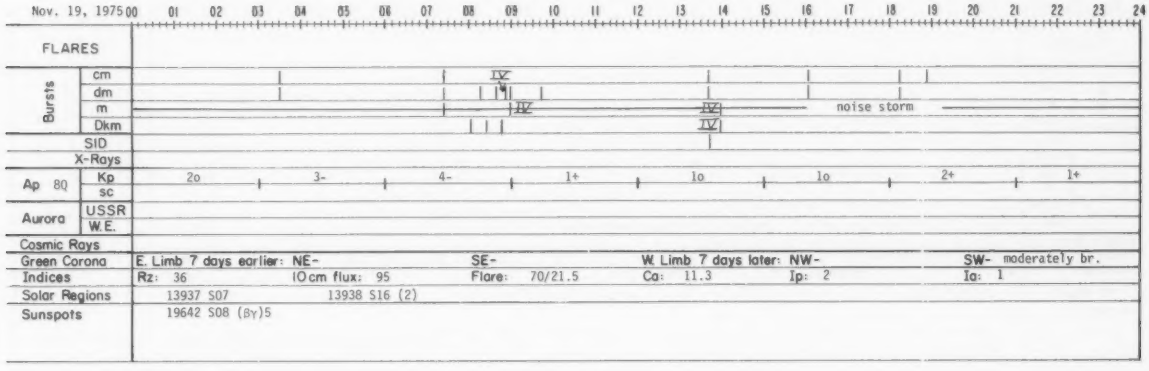

Nov. 14, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/37
Bursts
cm
dm
m
II
noise storm
Dkm
SID
X-Rays
Ap 300
Kp
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
Indices
Solar Regions
Sunspots
0+ 1- 0+ 0+ 0+ 1o 2o 1o
E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- no data SW- no data
Rz: 29 10cm flux: 84 Flare: 23/24.0 Ca: 8.5 Ip: 0 Ia: 2
13933 S14 (4)

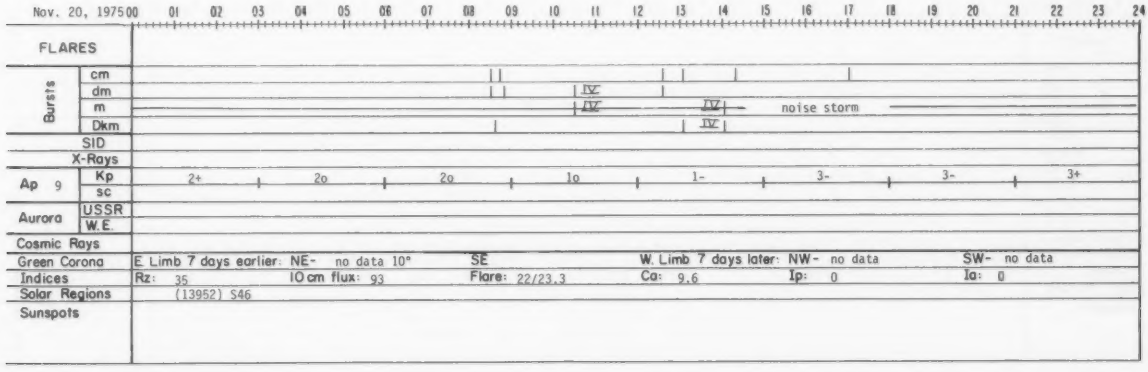

Nov. 15, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1n/37
Bursts
cm
dm
m
II ns IV
IV
IV
IV
ns
Dkm
SID
X-Rays
Ap 400
Kp
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
Indices
Solar Regions
Sunspots
1o 1o 1o 0+ 0o 1- 1o 3o
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Rz: 28 10cm flux: 86 Flare: 48/22.9 Ca: 9.2 Ip: 0 Ia: 0
13941 S03 (13942) S11

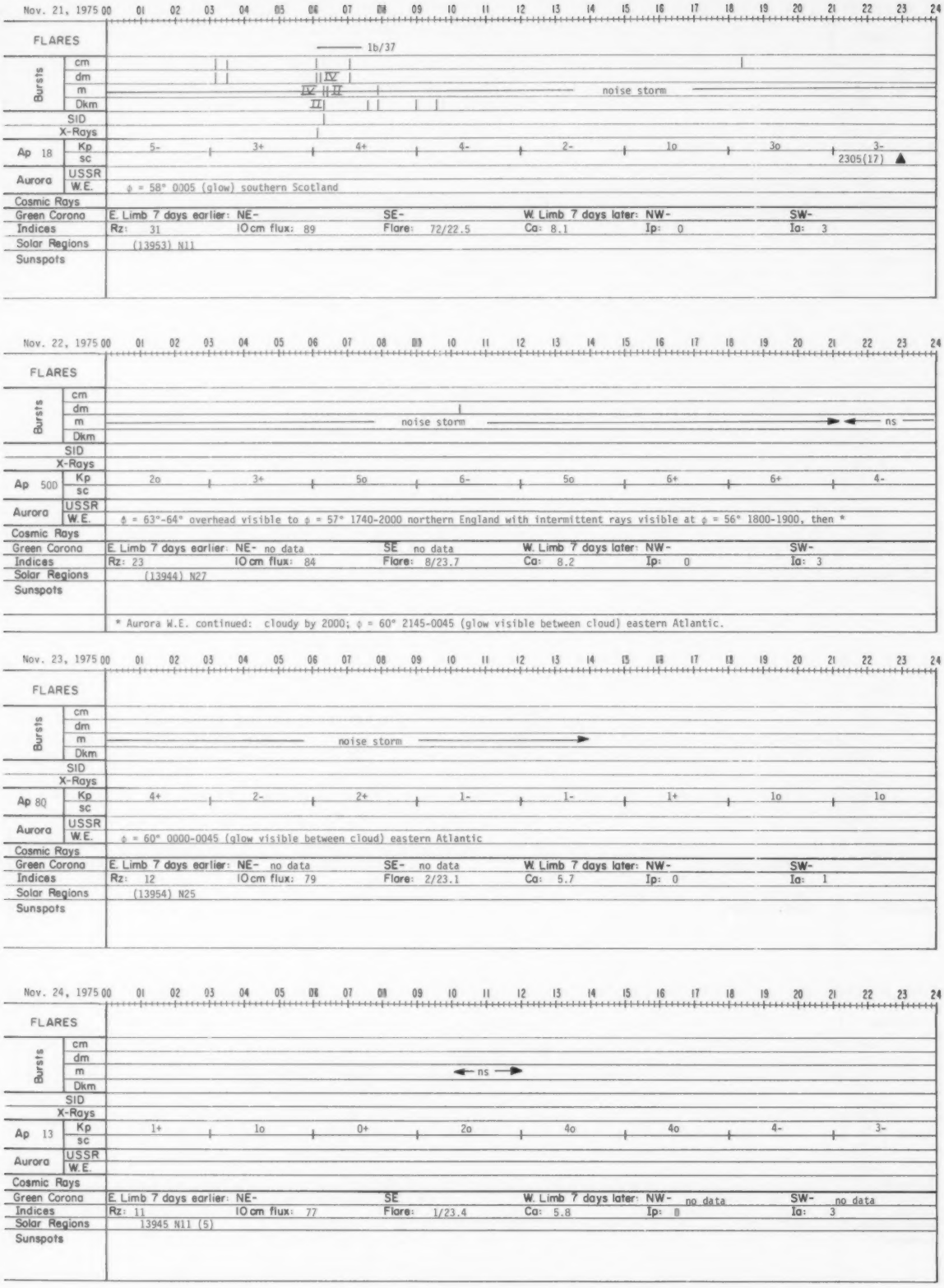

Nov. 16, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1b/37
Bursts
cm
dm
m
II
noise storm
IV
II
Dkm
SID
X-Rays
Ap 600
Kp
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
Indices
Solar Regions
Sunspots
2+ 2+ 2+ 1o 1o 1- 1+ 1o
E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- no data SW- no data
Rz: 28 10cm flux: 90 Flare: 35/23.4 Ca: 10.8 Ip: 0 Ia: 0
(13939) S38 13934 N07
19641 N06 (Ep)3


Nov. 17, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
IV
SID
X-Rays
Ap 17
Kp
1- 1- 2o 2+ 4+ 4+ 4o 4-
sc
Aurora
USSR
φ = 60° 1400 (HA1) and 1500 (SB)
W.E.
φ = 59° 2250-2320 (glow) central Scotland
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices
Rz: 30 10cm flux: 91 Flare: 31/22.2 Ca: 10.6 Ip: 0 Ia: 0
Solar Regions
Sunspots


Nov. 18, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
IV
SID
X-Rays
Ap 7Q
Kp
3o 2- 2- 2+ 2- 1o 1o 1o
sc
Aurora
USSR
φ = 58° 1500 (R1P1)
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- SW-
Indices
Rz: 33 10cm flux: 93 Flare: 54/18.8 Ca: 11.3 Ip: 1 Ia: 0
Solar Regions
(13943) N11
Sunspots


Nov. 19, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
IV
SID
X-Rays
Ap 8Q
Kp
2o 3- 4- 1+ 1o 1o 2+ 1+
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW- moderately br.
Indices
Rz: 36 10cm flux: 95 Flare: 70/21.5 Ca: 11.3 Ip: 2 Ia: 1
Solar Regions
13937 S07 13938 S16 (2)
Sunspots
19642 S08 (βγ)5


Nov. 20, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
IV
SID
X-Rays
Ap 9
Kp
2+ 2o 2o 1o 1- 3- 3- 3+
sc
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data 10° SE W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 35 10cm flux: 93 Flare: 22/23.3 Ca: 9.6 Ip: 0 Ia: 0
Solar Regions
(13952) S46
Sunspots


Nov. 21, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
1b/37
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 18
Kp
sc
5- 3+ 4+ 4- 2- 1o 3o 3-
2305(17)
Aurora
USSR
W.E.
ϕ = 58° 0005 (glow) southern Scotland
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices
Rz: 31 10cm flux: 89 Flare: 72/22.5 Ca: 8.1 Ip: 0 Ia: 3
Solar Regions
(13953) N11
Sunspots
Nov. 22, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
ns
SID
X-Rays
Ap 500
Kp
sc
2o 3+ 5o 6- 5o 6+ 6+ 4-
Aurora
USSR
W.E.
ϕ = 63°-64° overhead visible to ϕ = 57° 1740-2000 northern England with intermittent rays visible at ϕ = 56° 1800-1900, then *
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE no data W. Limb 7 days later: NW- SW-
Indices
Rz: 23 10cm flux: 84 Flare: 8/23.7 Ca: 8.2 Ip: 0 Ia: 3
Solar Regions
(13944) N27
Sunspots
* Aurora W.E. continued: cloudy by 2000; ϕ = 60° 2145-0045 (glow visible between cloud) eastern Atlantic.
Nov. 23, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 80
Kp
sc
4+ 2- 2+ 1- 1- 1+ 1o 1o
Aurora
USSR
W.E.
ϕ = 60° 0000-0045 (glow visible between cloud) eastern Atlantic
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- SW-
Indices
Rz: 12 10cm flux: 79 Flare: 2/23.1 Ca: 5.7 Ip: 0 Ia: 1
Solar Regions
(13954) N25
Sunspots
Nov. 24, 1975
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
ns
SID
X-Rays
Ap 13
Kp
sc
1+ 1o 0+ 2o 4o 4o 4- 3-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- no data SW- no data
Indices
Rz: 11 10cm flux: 77 Flare: 1/23.4 Ca: 5.8 Ip: 0 Ia: 3
Solar Regions
13945 N11 (S)
Sunspots

Nov. 25, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm

SID

X-Rays

Ap 15 — Kp: 4+ | 3- | 3o | 3o | 3o | 3o | 2o | 2+ — sc

Aurora: USSR, W.E.

Cosmic Rays

Green Corona

Indices: E. Limb 7 days earlier: NE- ; SE- ; W. Limb 7 days later: NW- no data ; SW- no data
Rz: 9 ; 10cm flux: 76 ; Flare: 0/22.8 ; Ca: no data ; Ip: 0 ; Ia: 2

Solar Regions: (13955) N33 ; (13949) S39

Sunspots

Nov. 26, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm — II | IV ; II || IV

SID

X-Rays

Ap 14 — Kp: 1o | 2+ | 4+ | 4+ | 4- | 1- | 1o | 2- — sc

Aurora: USSR, W.E.

Cosmic Rays

Green Corona

Indices: E. Limb 7 days earlier: NE- no data ; SE no data ; W. Limb 7 days later: NW- ; SW-
Rz: 7 ; 10cm flux: 74 ; Flare: 0/18.5 ; Ca: no data ; Ip: 0 ; Ia: 3

Solar Regions: (13950) N24

Sunspots

Nov. 27, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm

SID

X-Rays

Ap 500 — Kp: 2+ | 1- | 2o | 1+ | 1o | 1+ | 1o | 2- — sc

Aurora: USSR, W.E.

Cosmic Rays

Green Corona

Indices: E. Limb 7 days earlier: NE- no data ; SE- no data ; W. Limb 7 days later: NW- no data ** ; SW-
Rz: 0 ; 10cm flux: 73 ; Flare: 0/18.8 ; Ca: no data ; Ip: 0 ; Ia: 5

Solar Regions

Sunspots

** 305°, 320°, 325°, 335°, 355°

Nov. 28, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm

SID

X-Rays

Ap 9 — Kp: 3- | 1+ | 3o | 2+ | 3o | 2+ | 2- | 1o — sc

Aurora: USSR, W.E.

Cosmic Rays

Green Corona

Indices: E. Limb 7 days earlier: NE- no data ; SE no data ; W. Limb 7 days later: NW- ; SW-
Rz: 0 ; 10cm flux: 72 ; Flare: 0/23.2 ; Ca: 2.2 ; Ip: 0 ; Ia: 1

Solar Regions

Sunspots

Nov. 29, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 29	Kp	2o | 3- | 5- | 5o | 4- | 5- | 5o | 3+
	sc	
Aurora	USSR	ϕ = 57° 1600, 1700, 1900-2200 (R_1R2)
	W.E.	ϕ = 60° 1700-0300 (glow) and 1700 (R) central Scotland; ϕ = 58° 1920-0030 southern Scotland; ϕ = 63° 2115 overhead, visible *
Cosmic Rays		
Green Corona	E. Limb 7 days earlier: NE-	SE- W. Limb 7 days later: NW- SW-
Indices	Rz: 0	10 cm flux: 73 Flare: 0/21.5 Ca: no data Ip: 0 Ia: 2
Solar Regions	(13956) S12	(13962) S07 (13961) S03
Sunspots		
	* to ϕ = 58° (B) eastern Atlantic.	

Nov. 30, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 36D	Kp	5o | 5- | 4+ | 4- | 5o | 4- | 5- | 5-
	sc	
Aurora	USSR	
	W.E.	ϕ = 60° 0000-0300 (glow) and 0050-0200 (R) central Scotland; ϕ = 58° 0000-0030 (R) southern Scotland; ϕ = 60° 1850-2400 (glow with *
Cosmic Rays		
Green Corona	E. Limb 7 days earlier: NE- no data	SE no data W. Limb 7 days later: NW- no data SW- no data
Indices	Rz: 0	10 cm flux: 73 Flare: 0/21.3 Ca: no data Ip: 0 Ia: 6
Solar Regions	(13968) N20	(13963) S09
Sunspots		(19644) S10 Sp
	* occasional R) central Scotland; ϕ = 58° 1850-2400 (glow) southern Scotland.	

ADDENDA: Aurora USSR

1975
Aug. 31 : ϕ = 60° 2000-2100 (HA1)

Sep. 6 : ϕ = 57° 1400-1500 (R_1B1)
7 : ϕ = 59° 1500-1600 (HA2)
8 : ϕ = 60° 2000-2100 (HA1)
9 : ϕ = 58° 0100-0200 (SR1); ϕ = 57° 1500-1600 (R_2R1), 1700 (HB1), 2000-2300 ($R_{1-2}R1-2$)
10 : ϕ = 57° 0000 (R_1R1); ϕ = 58° 1300-1400 (HB2); ϕ = 59° 1400-1600 (HA2); ϕ = 60° 1800-2000, 2100 (HA2)
11 : ϕ = 59° 1100-1400 (SA1); ϕ = 57° 1500-1600 (HB); ϕ = 58° 1600-1700 (HP2 and HA2)
12 : ϕ = 59° 1800-1900 (HA2); ϕ = 60° 2000-2100 (HA1)
27 : ϕ = 59° 1500-1700 (HA2)
28 : ϕ = 57° 1600 (SP1)

Oct. 3 : ϕ = 58° 2200-0100 (HA1)
4 : ϕ = 59° 0000 (R_2A3), 1700-1800 (HA1-2); ϕ 60° 1800-2400 (HA1-2)
5 : ϕ = 59° 0000 (R_2A_3), 1800 (R_1R)
6 : ϕ = 58° 2000 (R_1R)
7 : ϕ = 60° 1800-2100 (R_1B1); ϕ = 58° 2200 (R_2V_2)
8 : ϕ = 58° 0000 (HB1); ϕ = 60° 1800-2000 (HA1-2), 2200 (R_1B2); ϕ = 59° 2100 (R_2B4)
9 : ϕ = 59° 1500, 1800 (HA2), 2100 (R_1A2), 2300 (R_2B_2)
10 : ϕ = 59° 1800 (HB1)
11 : ϕ = 59° 1700-1800 (HA1)
12 : ϕ = 60° 1800-1900 (HB1), 1700-1900 (HA2)

REGIONAL FLARE INDEX
INCLUDES ALL FLARES

MC MATH FLAGE NO.	LAT	CMP DATE	DATE FIRST FLARE	DATE LAST FLARE	FLARE-INDEX SUM	FLARE-INDEX MEAN	TOTAL NO. OF FLARES
13922	S 4	75/11/06.9	75/11/04	75/11/04	3.38	3.38	1
13927	S 8	75/11/03.5	75/11/04	75/11/04	.84	.84	1
13926	N 6	75/11/10.9	75/11/04	75/11/16	106.31	8.14	46
13936	S14	75/11/13.5	75/11/12	75/11/12	5.28	5.28	1
13934	N 7	75/11/16.2	75/11/14	75/11/19	24.37	4.31	9
13937	S 7	75/11/19.3	75/11/14	75/11/24	332.59	30.24	67

Note:
Because of differences in method of calculation, the dates of Central Meridian Passage for the McMath Plage Regions vary somewhat from those given elsewhere. Any region not listed here produced no flares during its disk passage.

MISCELLANEOUS DATA

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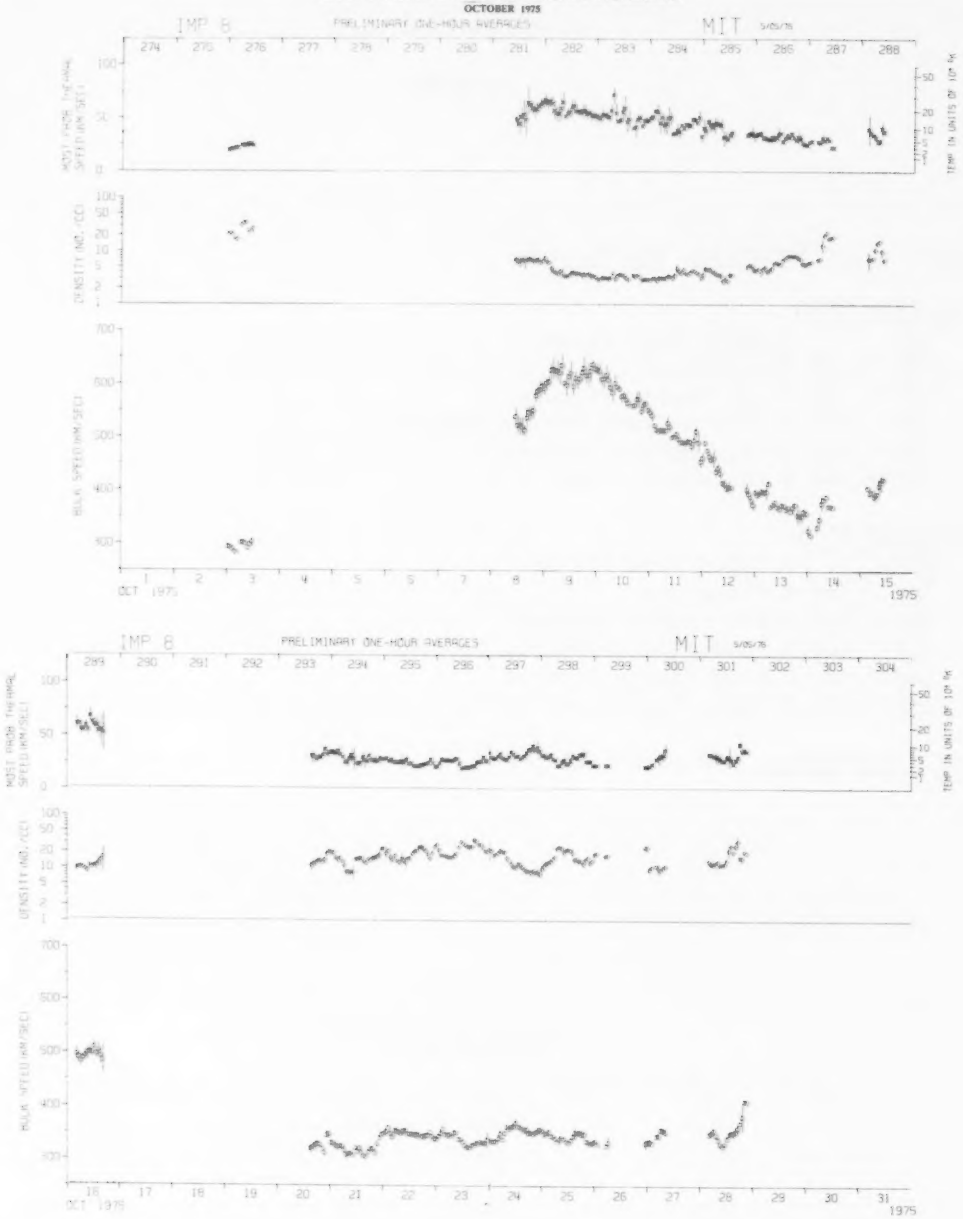
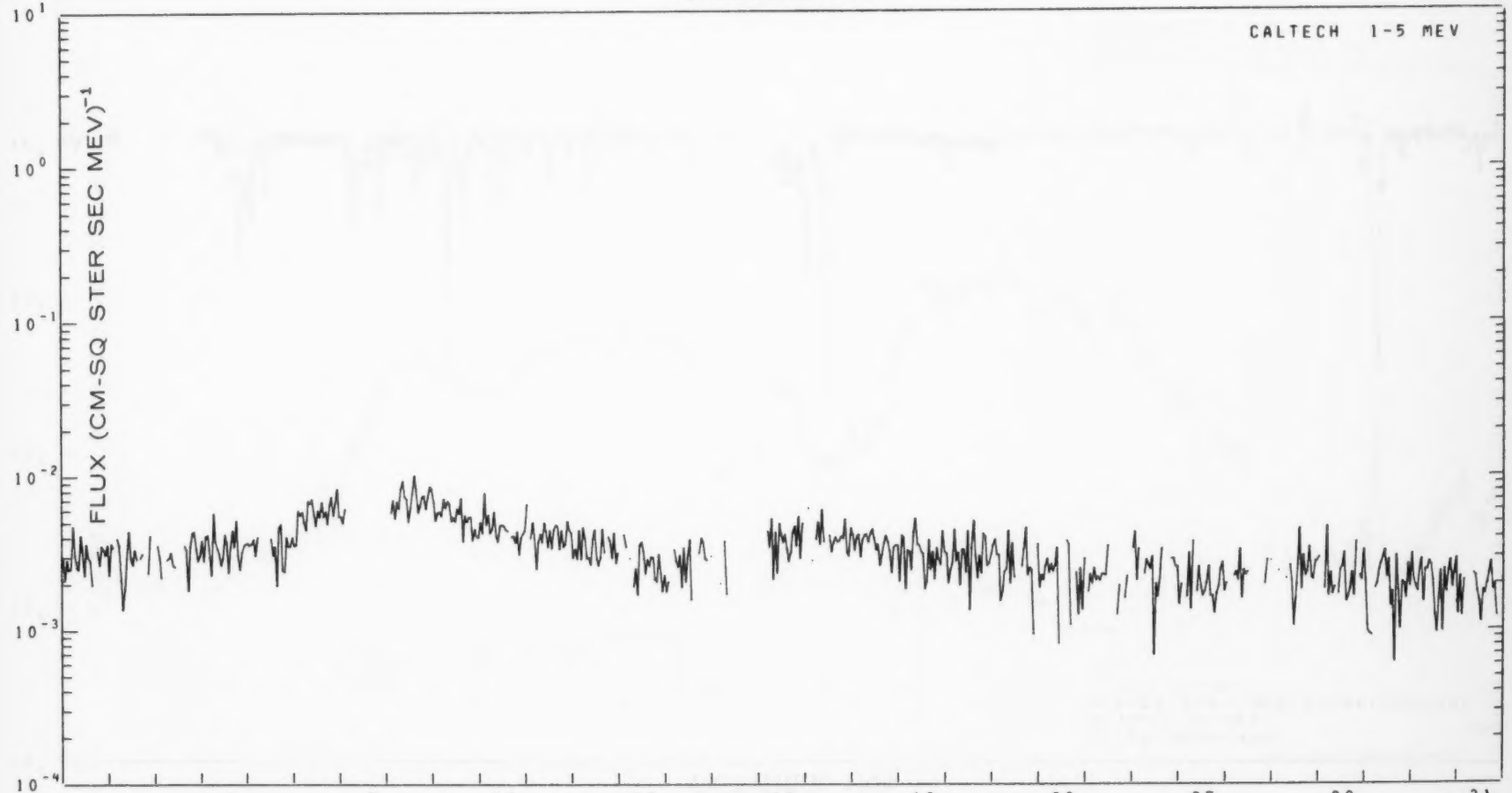
IMP 7 AND 8 SOLAR WIND PLASMA

OCTOBER 1975


IMP 8
PRELIMINARY ONE-HOUR AVERAGES
MIT
5/05/76
274 275 276 277 278 279 280 281 282 283 284 285 286 287 288
NOSE FROM THERMAL SPEED (KM/SEC)
TEMP IN UNITS OF 10⁴ °K
DENSITY (NO./CC)
BULK SPEED (KM/SEC)
OCT 1975
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1975
IMP 8
PRELIMINARY ONE-HOUR AVERAGES
MIT
5/05/76
289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304
NOSE FROM THERMAL SPEED (KM/SEC)
TEMP IN UNITS OF 10⁴ °K
DENSITY (NO./CC)
BULK SPEED (KM/SEC)
OCT 1975
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
1975

IMP 7 AND 8 ELECTRONS

OCTOBER 1975



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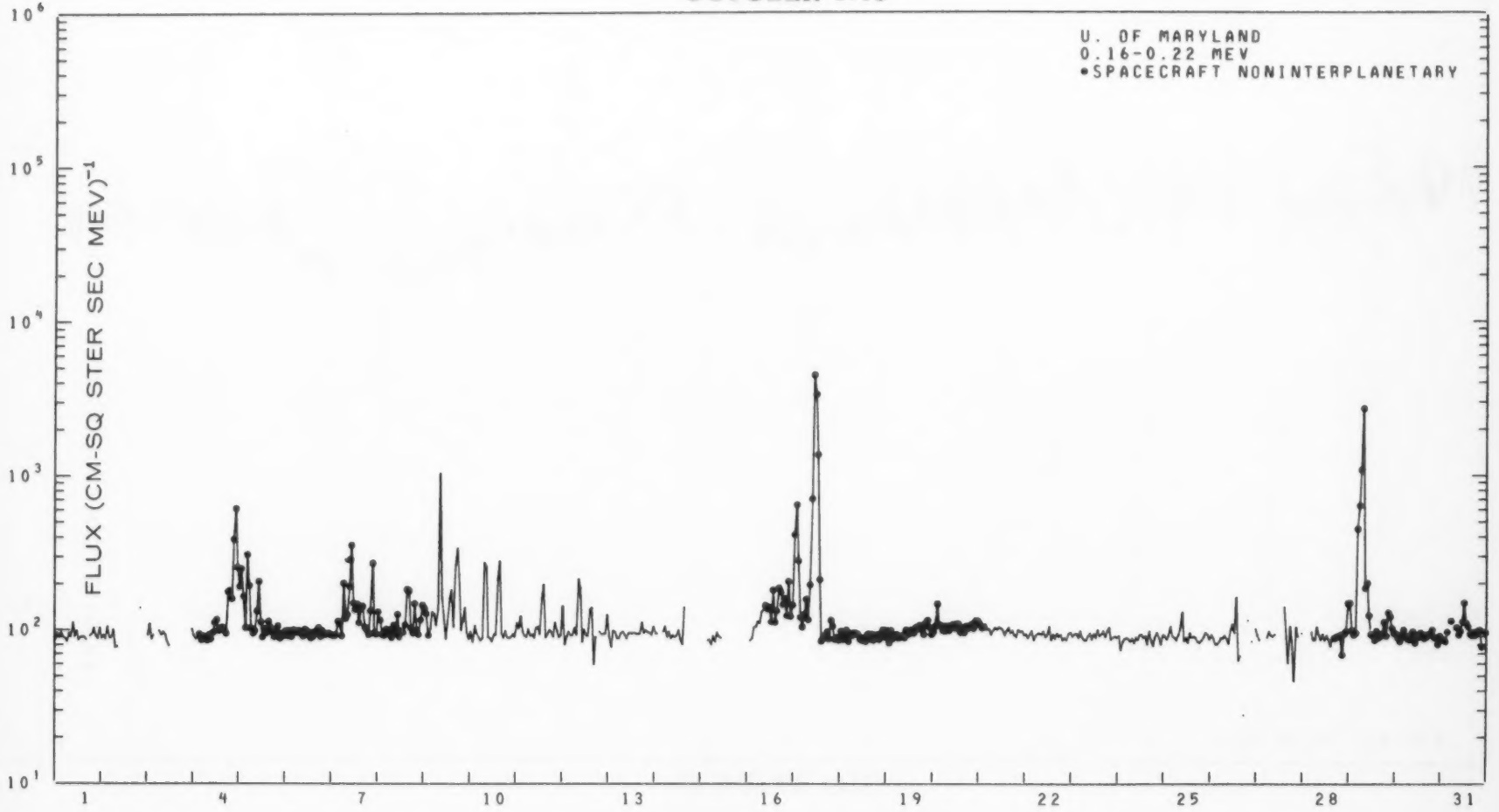
Misc
Oct 75

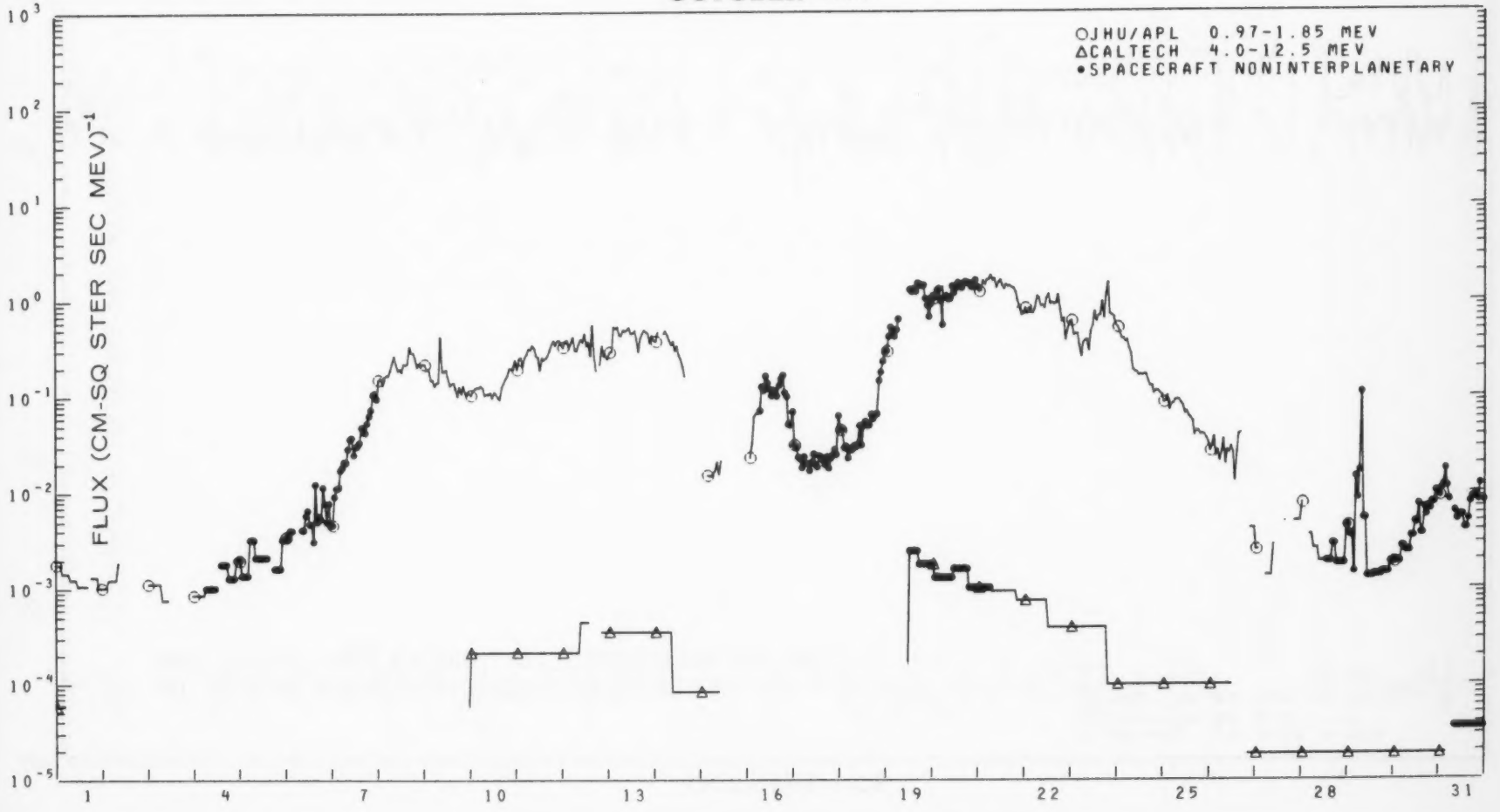
IMP 7 AND 8 LOW ENERGY PROTONS

OCTOBER 1975



IMP 7 AND 8 INTERMEDIATE ENERGY PROTONS

OCTOBER 1975



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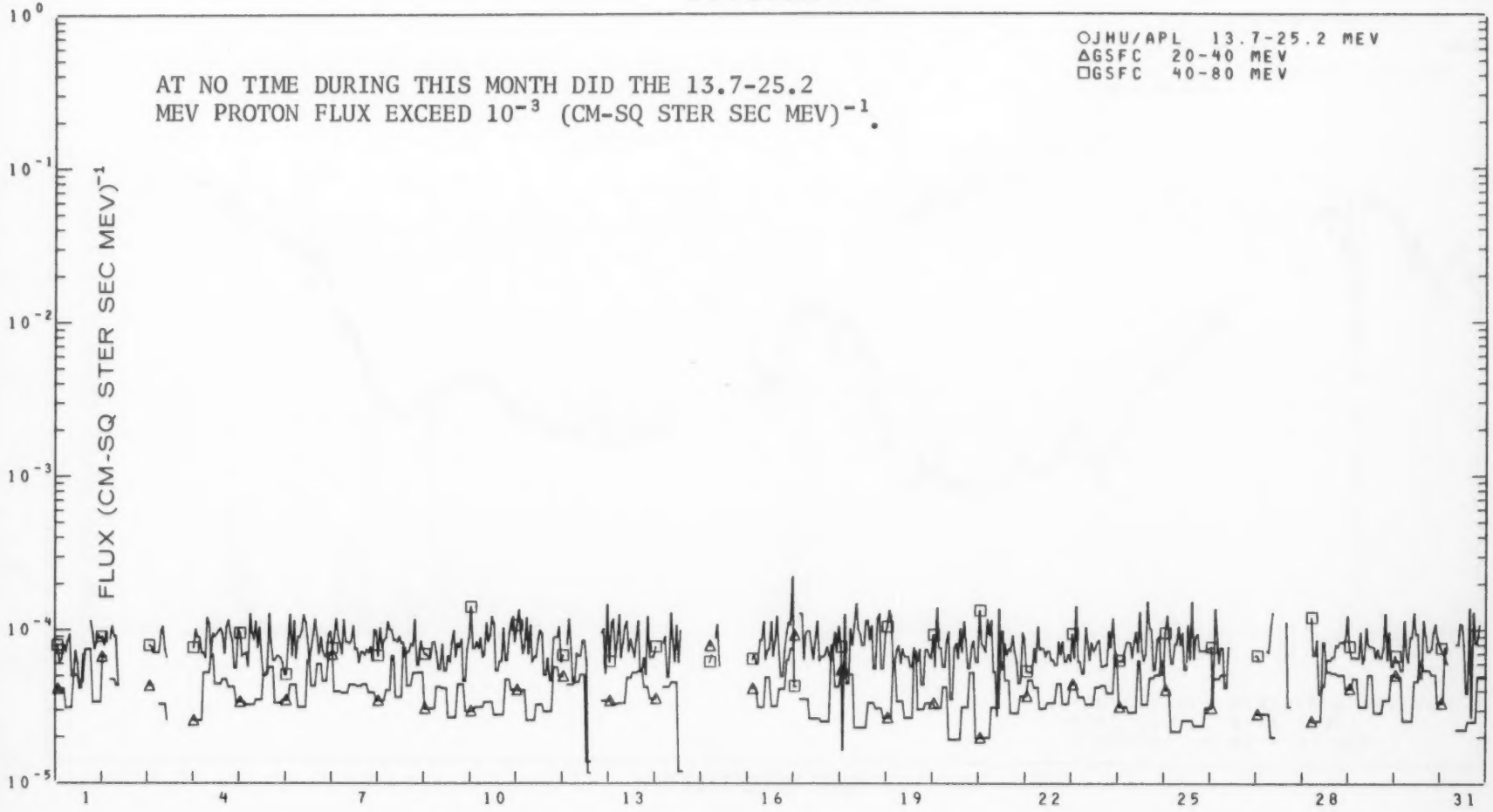
Misc
Oct 75

IMP 7 AND 8 HIGH ENERGY PROTONS

OCTOBER 1975



IMP 7 AND 8 ALPHA PARTICLES

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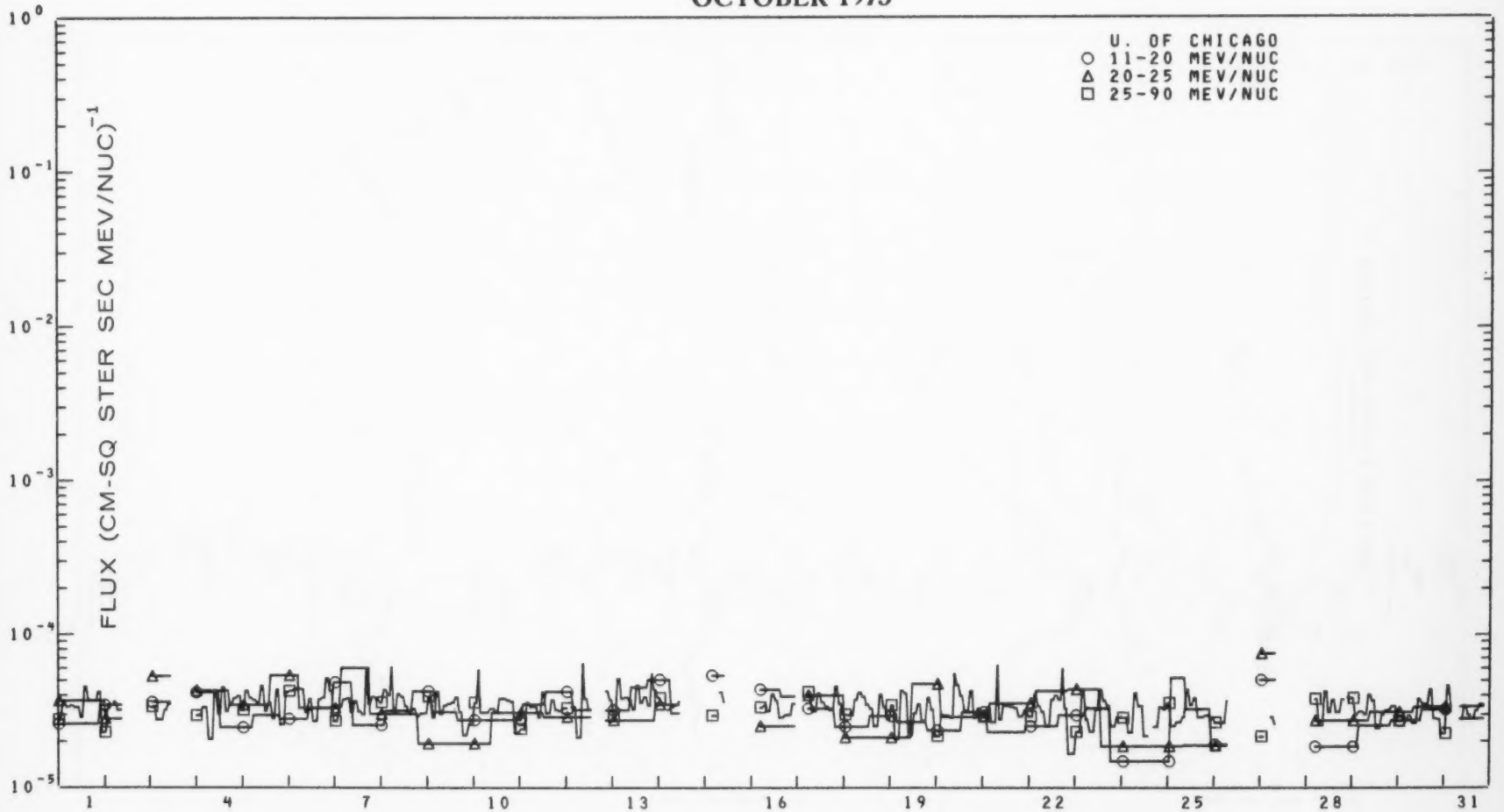

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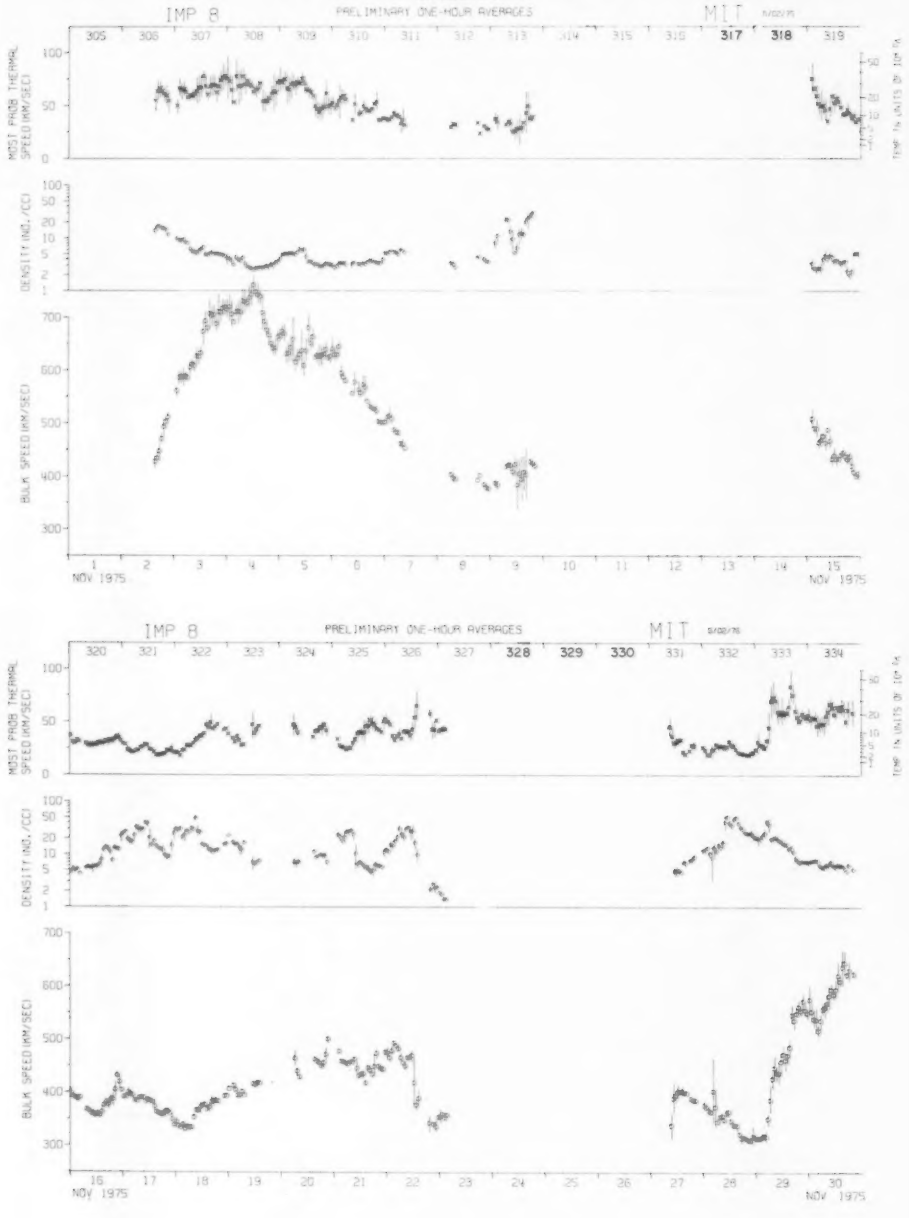
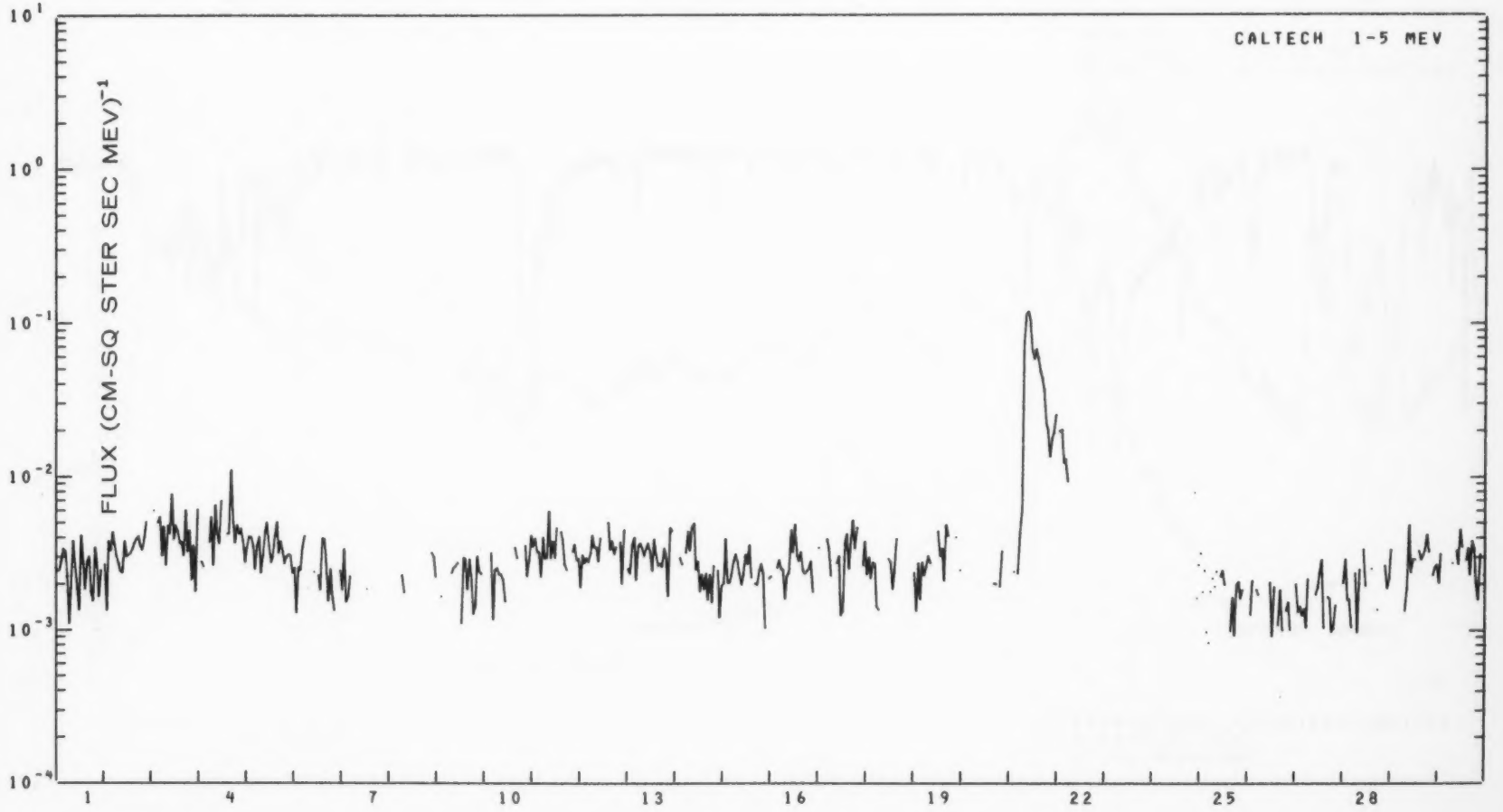
IMP 7 AND 8 SOLAR WIND PLASMA

NOVEMBER 1975



IMP 7 AND 8 ELECTRONS

NOVEMBER, 1975



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IMP 7 AND 8 LOW ENERGY PROTONS

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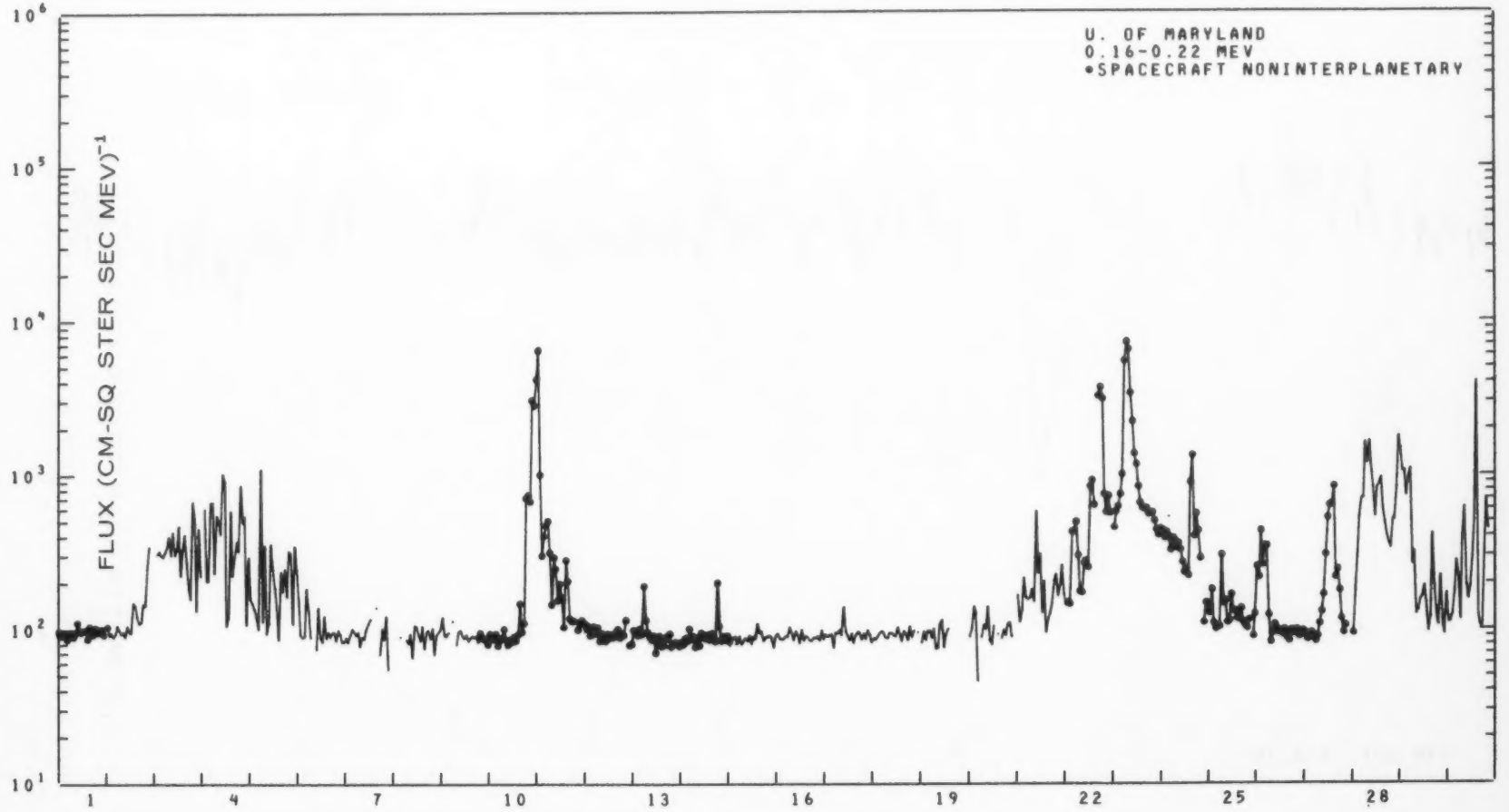
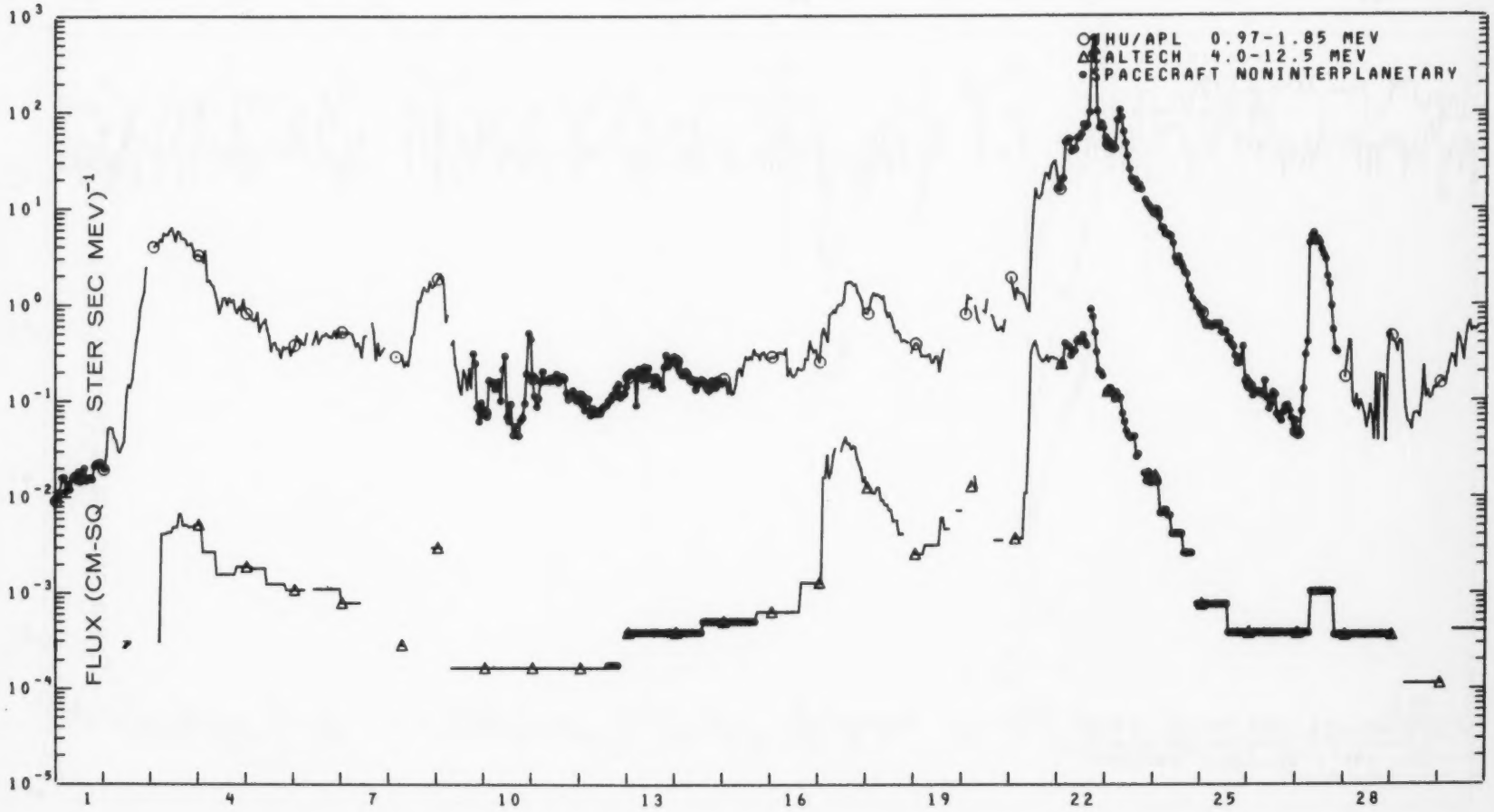


IMP 7 AND 8 INTERMEDIATE ENERGY PROTONS

NOVEMBER, 1975



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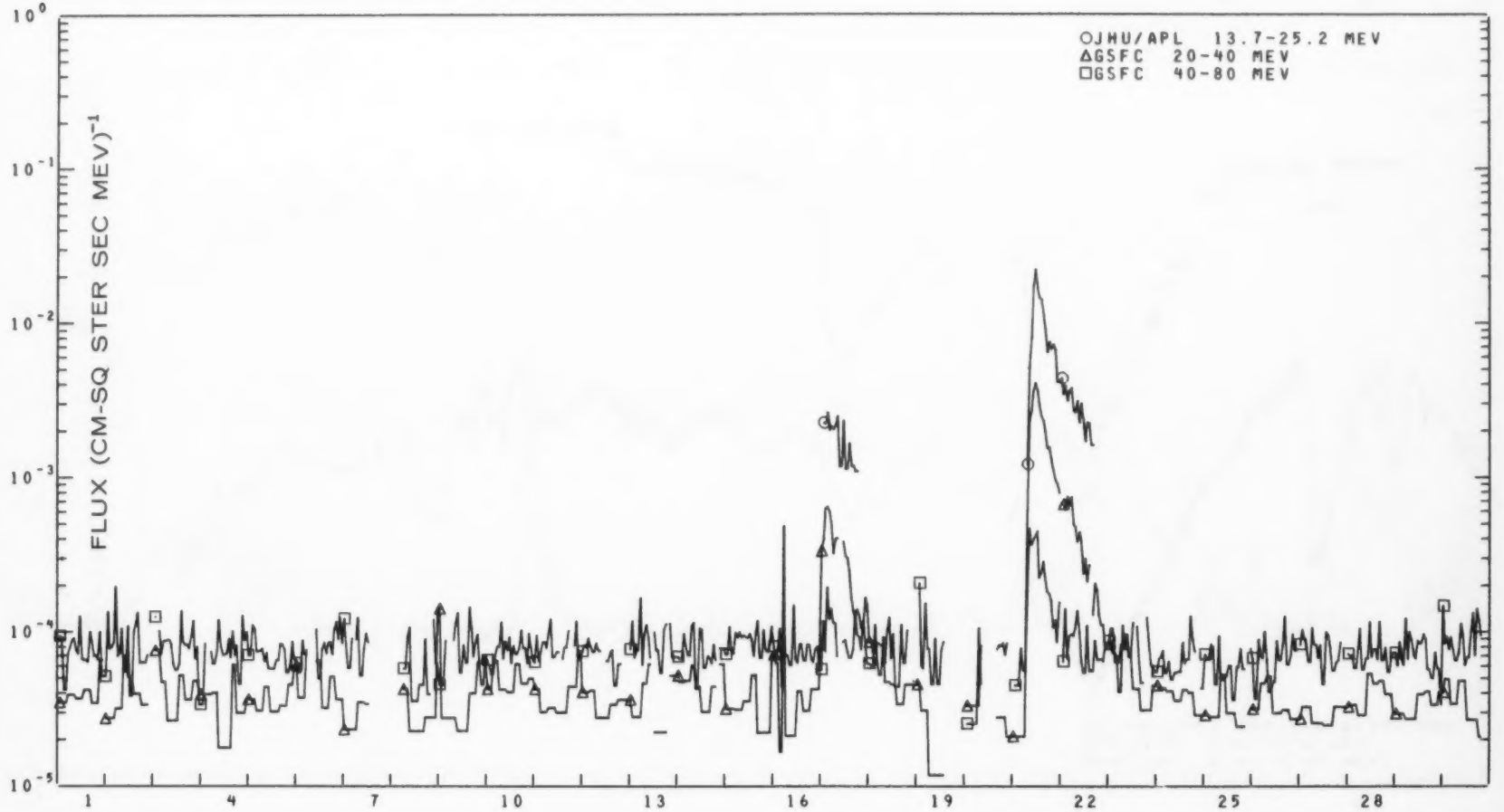
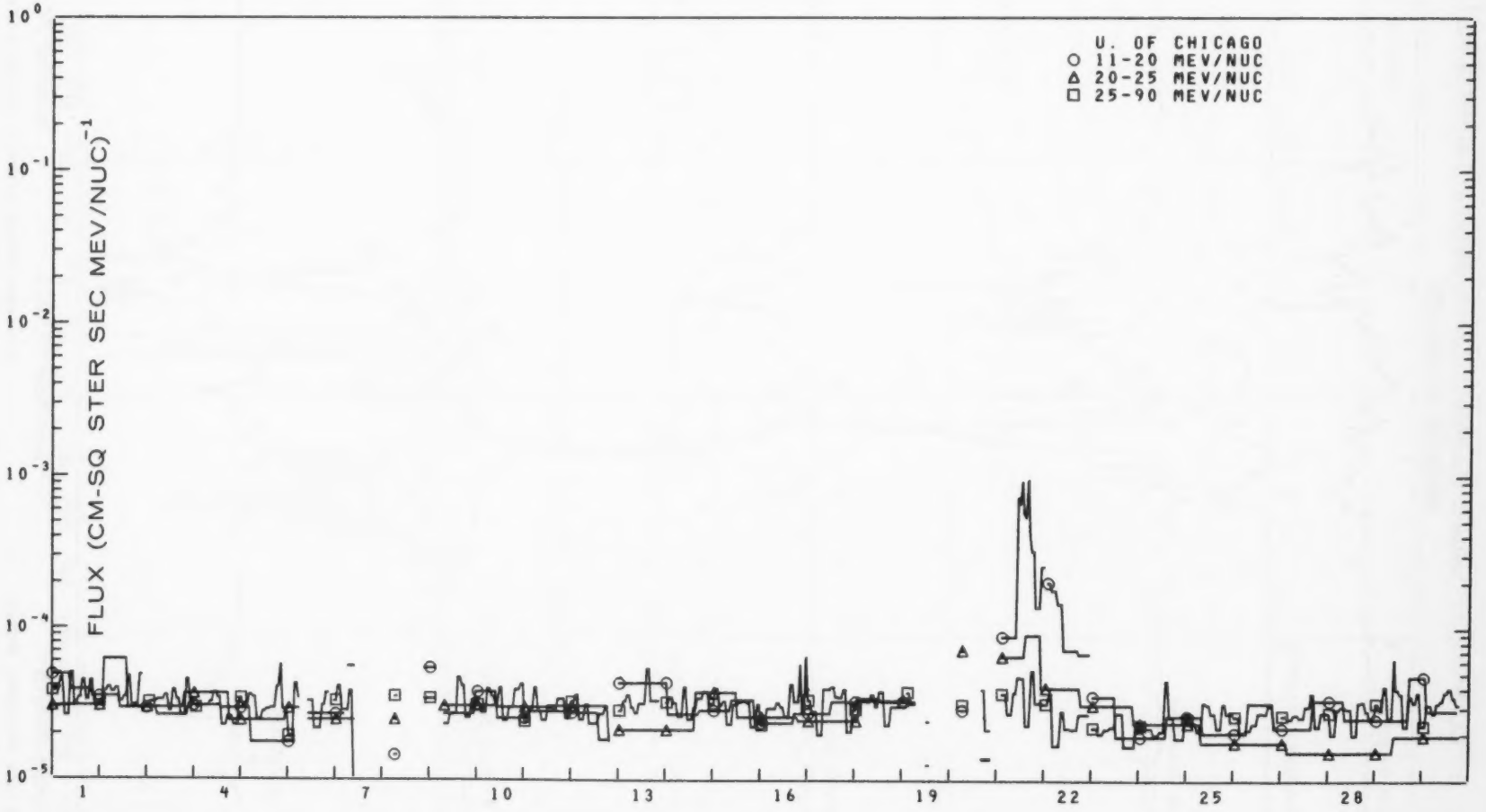
IMP 7 AND 8 HIGH ENERGY PROTONS

NOVEMBER, 1975



IMP 7 AND 8 ALPHA PARTICLES

NOVEMBER, 1975



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Misc
Nov 75

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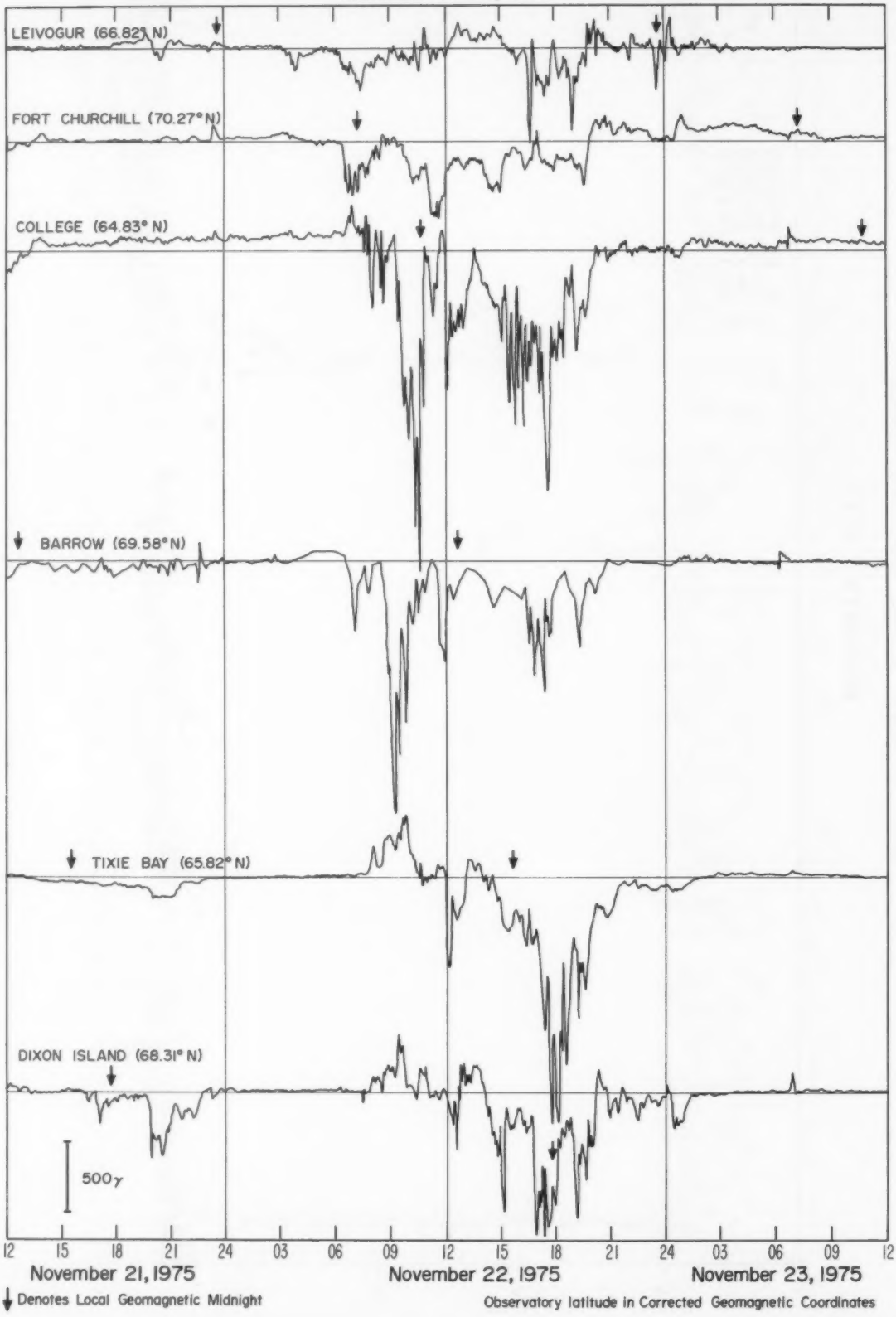
Misc
Nov 75

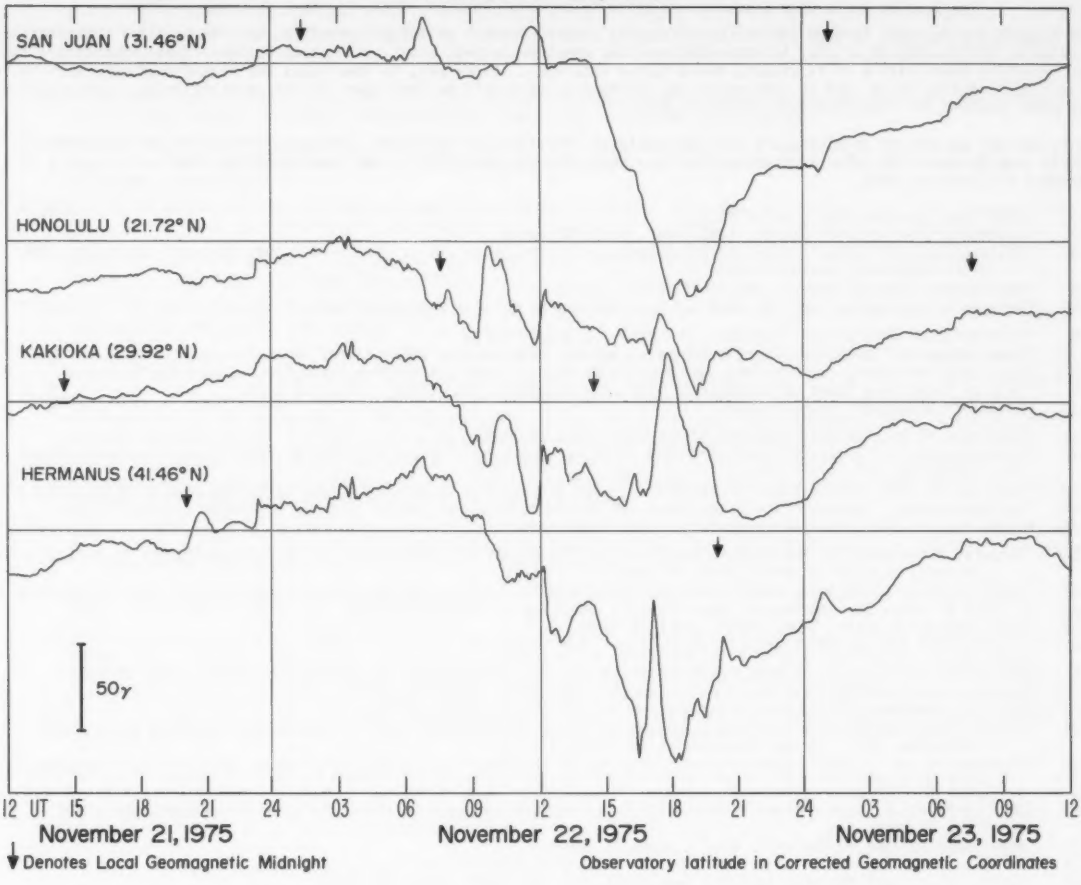
H-COMPONENT MAGNETOGRAMS OF GEOMAGNETIC STORMS

November 21-23, 1975

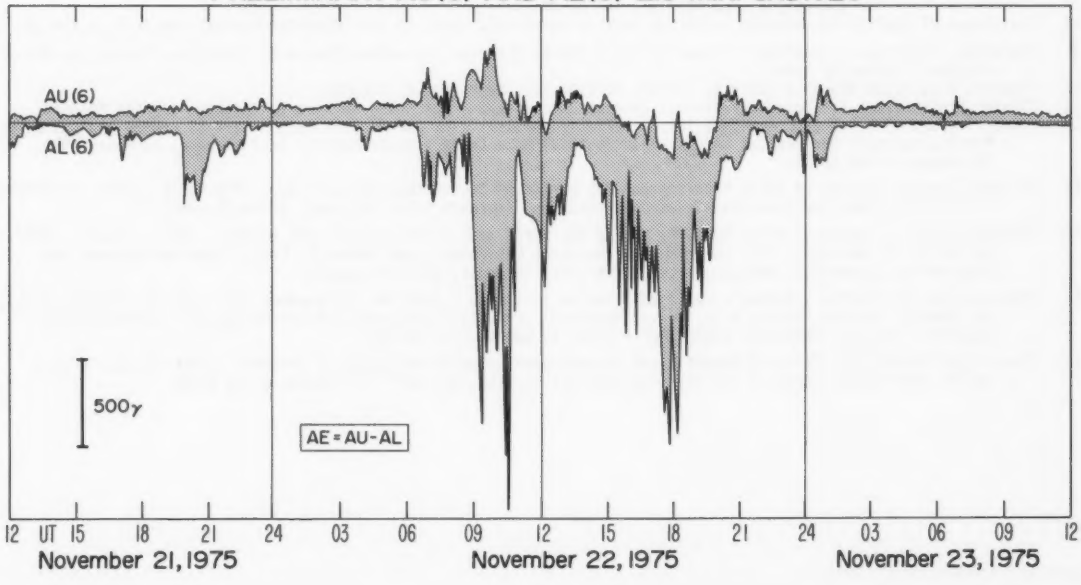

LEIVOGUR (66.82° N)
FORT CHURCHILL (70.27° N)
COLLEGE (64.83° N)
BARROW (69.58° N)
TIXIE BAY (65.82° N)
DIXON ISLAND (68.31° N)
500γ
12 15 18 21 24 03 06 09 12 15 18 21 24 03 06 09 12
November 21, 1975
November 22, 1975
November 23, 1975
Denotes Local Geomagnetic Midnight
Observatory latitude in Corrected Geomagnetic Coordinates

H-COMPONENT MAGNETOGRAMS OF GEOMAGNETIC STORMS

November 21-23, 1975


SAN JUAN (31.46° N)
HONOLULU (21.72° N)
KAKIOKA (29.92° N)
HERMANUS (41.46° N)
50γ
12 UT 15 18 21 24 03 06 09 12 15 18 21 24 03 06 09 12
November 21, 1975
November 22, 1975
November 23, 1975
Denotes Local Geomagnetic Midnight
Observatory latitude in Corrected Geomagnetic Coordinates

PRELIMINARY AU(6) AND AL(6) 2.5-MIN. INDICES



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